

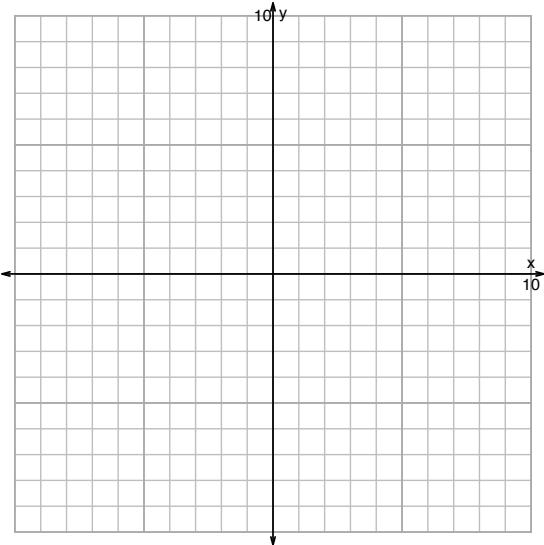
Name: \_\_\_\_\_

Date: \_\_\_\_\_

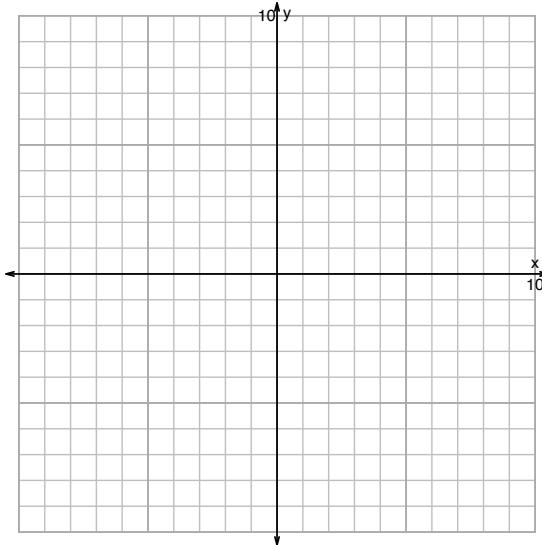
s18: EXP LOG (QUIZ v300)

1. (10 pts) Graph  $y = 2^{x-6} - 2$  and  $y = \log_2(x + 4) + 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-6} - 2$$



$$y = \log_2(x + 4) + 5$$

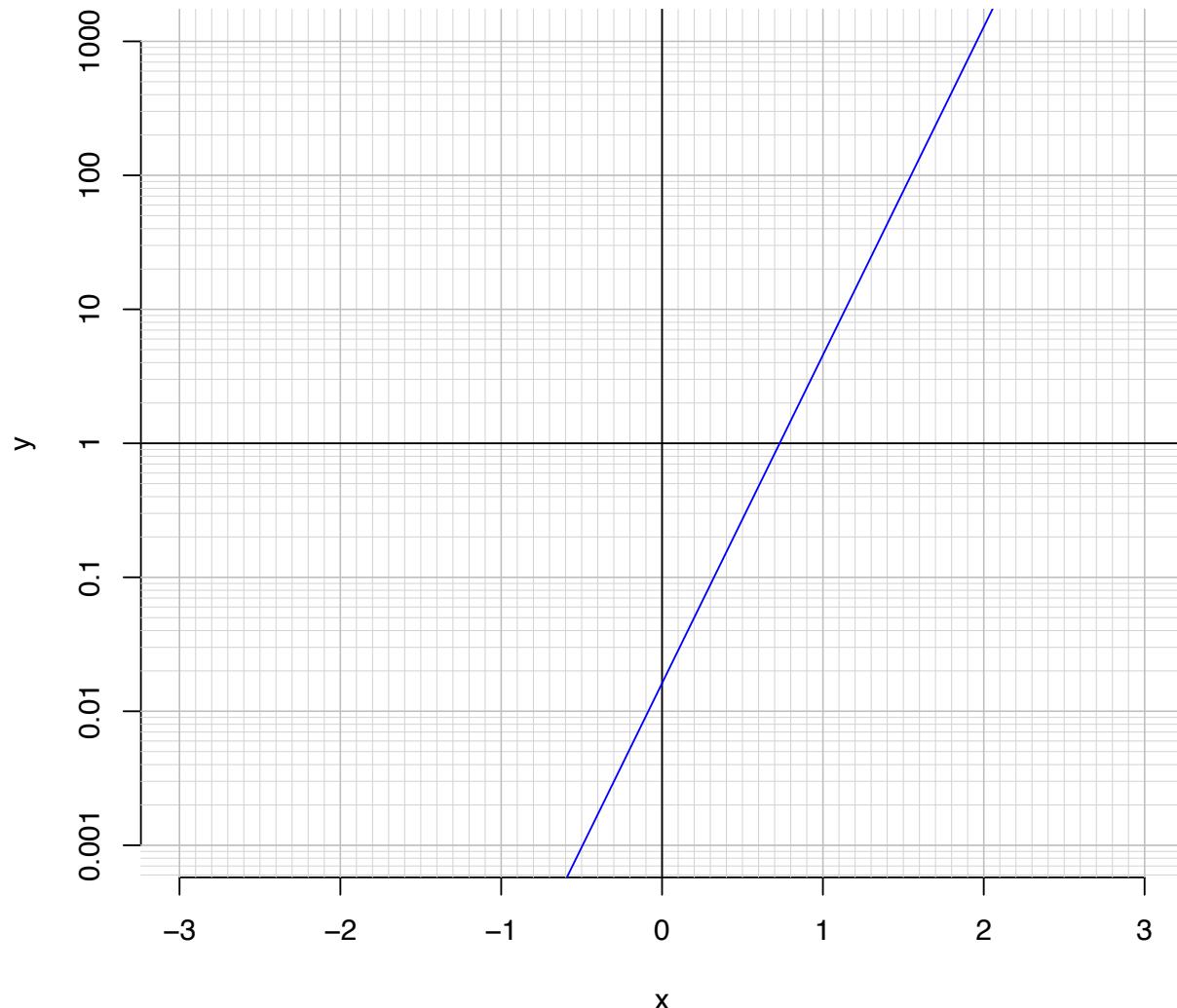


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$11 = \left(\frac{3}{5}\right) \cdot 10^{4t/7}$$

3. (10 pts) An exponential function  $f(x) = 0.0162 \cdot e^{5.64x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.1)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{5.64} \cdot \ln\left(\frac{x}{0.0162}\right)$$

Using the plot above, evaluate  $f^{-1}(0.05)$ .

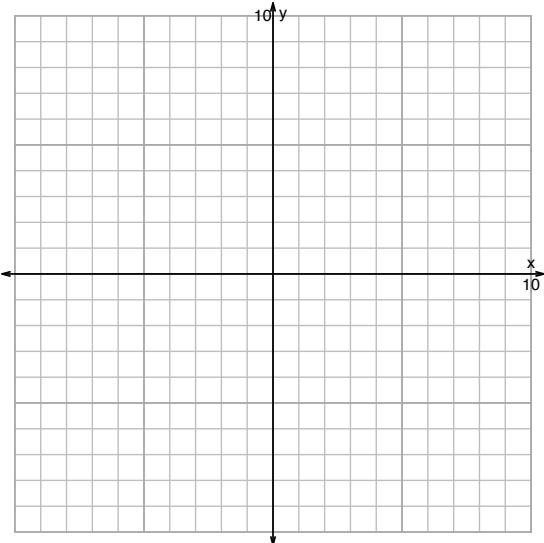
Name: \_\_\_\_\_

Date: \_\_\_\_\_

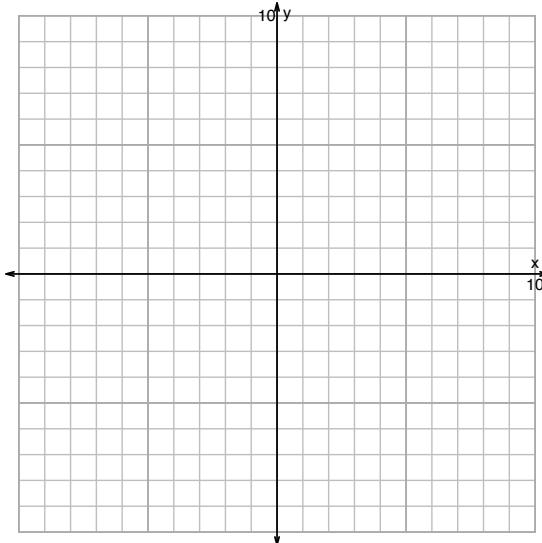
s18: EXP LOG (QUIZ v301)

1. (10 pts) Graph  $y = \log_2(x + 1) + 5$  and  $y = 2^{x+4} - 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 1) + 5$$



$$y = 2^{x+4} - 2$$

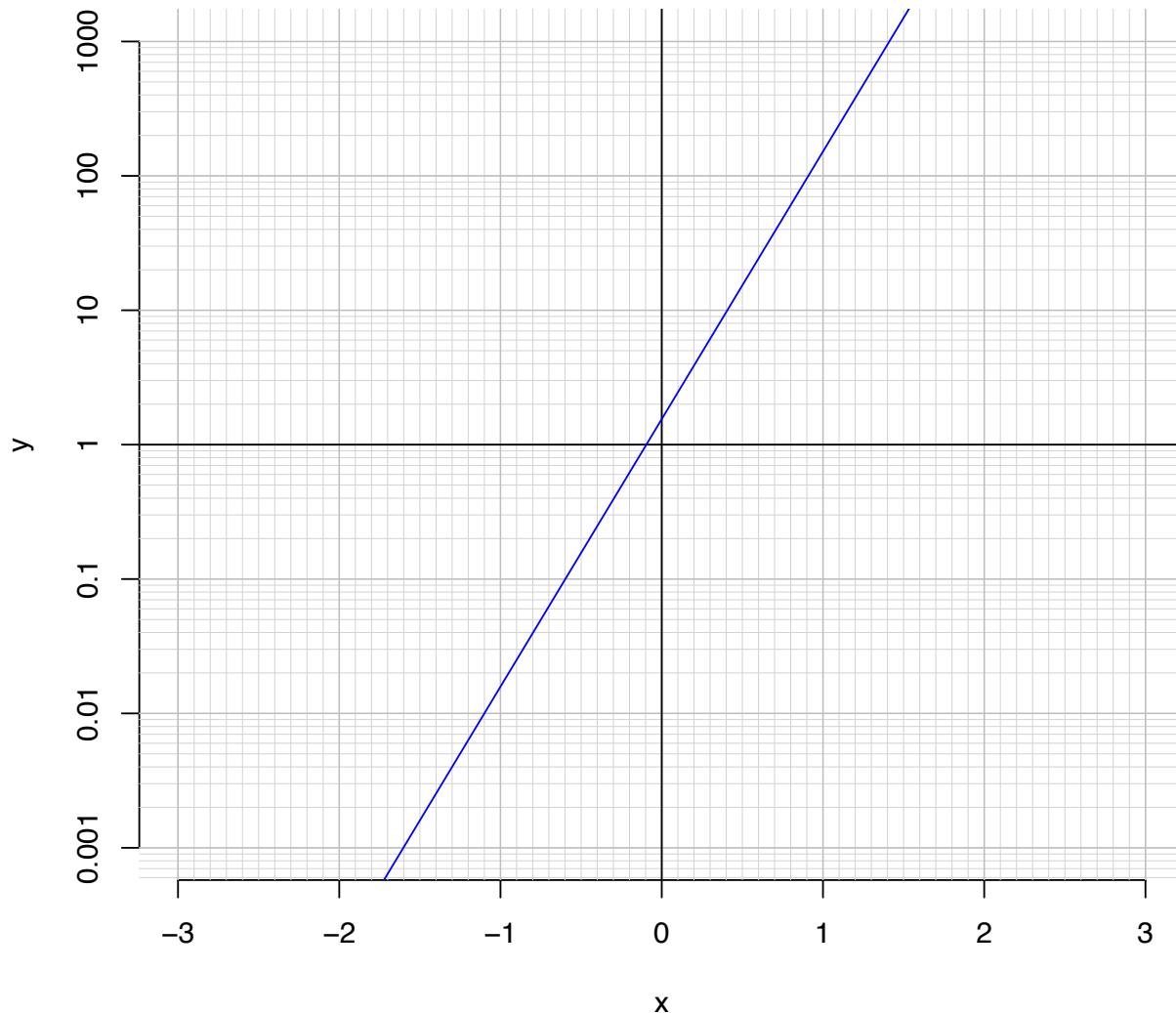


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-19 = \left(\frac{-5}{4}\right) \cdot 2^{-3t/7}$$

3. (10 pts) An exponential function  $f(x) = 1.55 \cdot e^{4.58x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.3)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{4.58} \cdot \ln\left(\frac{x}{1.55}\right)$$

Using the plot above, evaluate  $f^{-1}(0.004)$ .

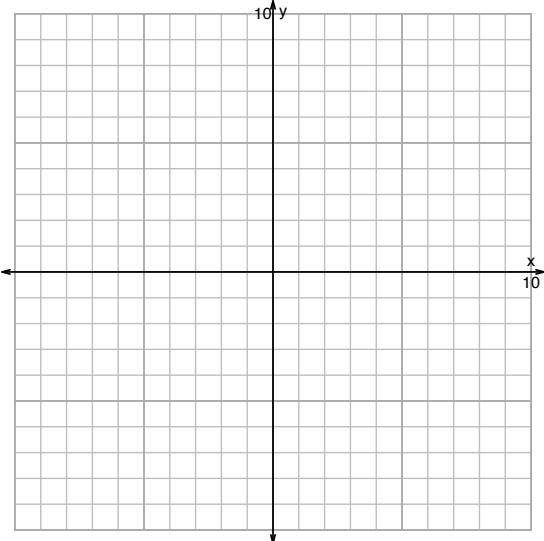
Name: \_\_\_\_\_

Date: \_\_\_\_\_

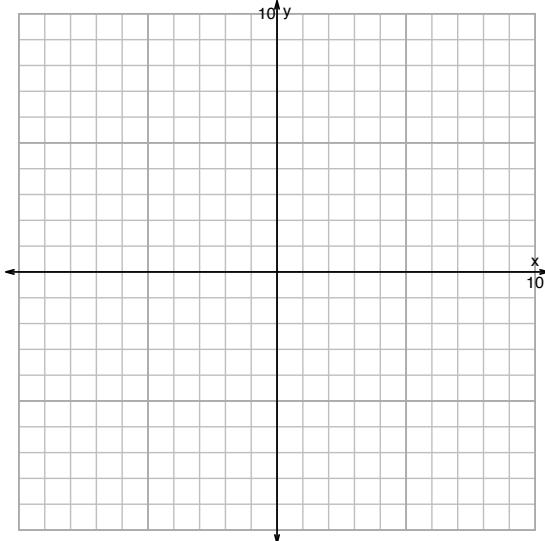
s18: EXP LOG (QUIZ v302)

1. (10 pts) Graph  $y = \log_2(x + 1) + 4$  and  $y = 2^{x-3} + 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 1) + 4$$



$$y = 2^{x-3} + 2$$

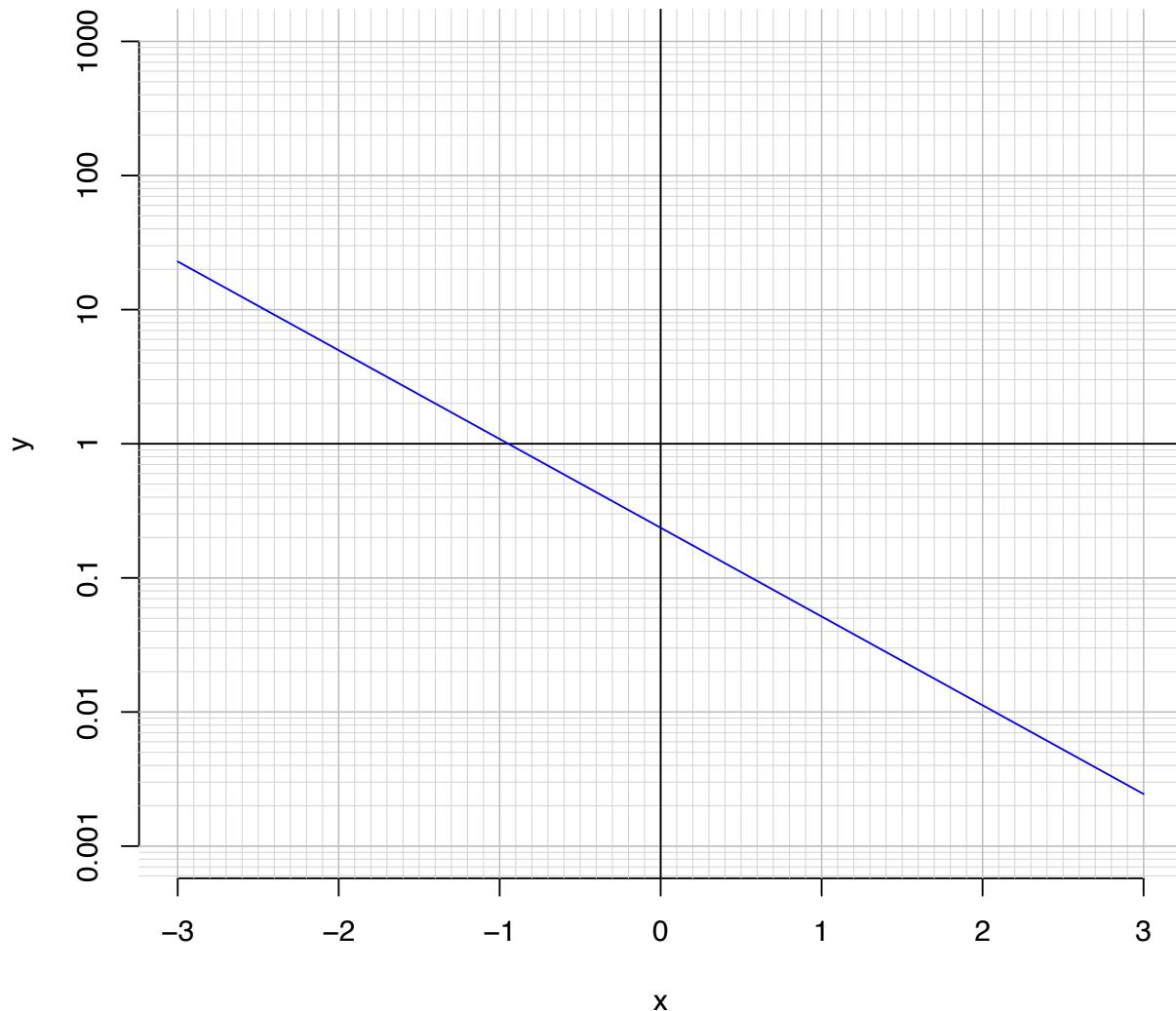


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-5}{7}\right) \cdot 2^{-3t/4}$$

3. (10 pts) An exponential function  $f(x) = 0.236 \cdot e^{-1.52x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(0.9)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.52} \cdot \ln\left(\frac{x}{0.236}\right)$$

Using the plot above, evaluate  $f^{-1}(0.8)$ .

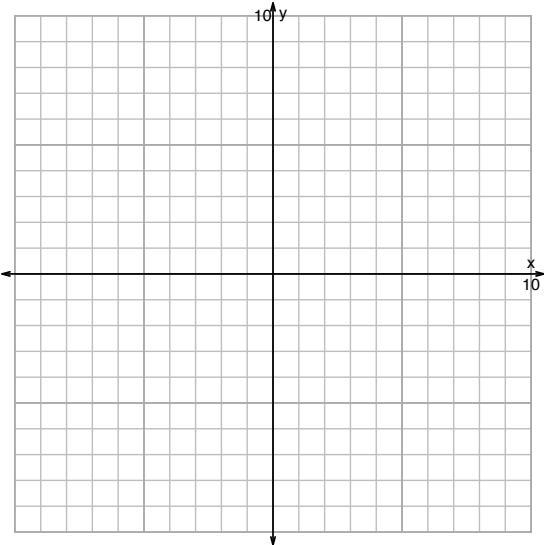
Name: \_\_\_\_\_

Date: \_\_\_\_\_

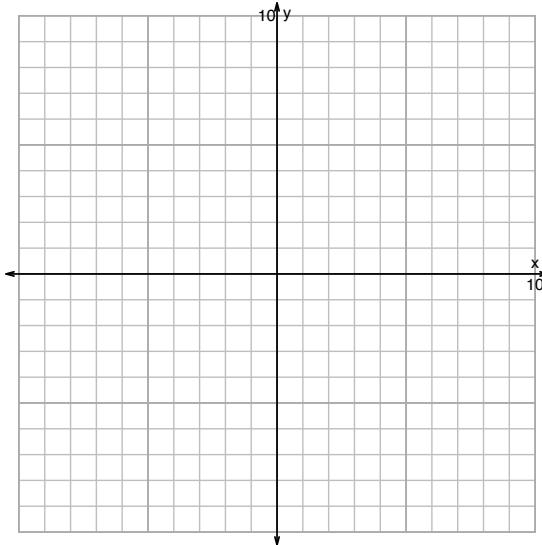
s18: EXP LOG (QUIZ v303)

1. (10 pts) Graph  $y = 2^{x-3} + 5$  and  $y = \log_2(x+1) - 6$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-3} + 5$$



$$y = \log_2(x+1) - 6$$

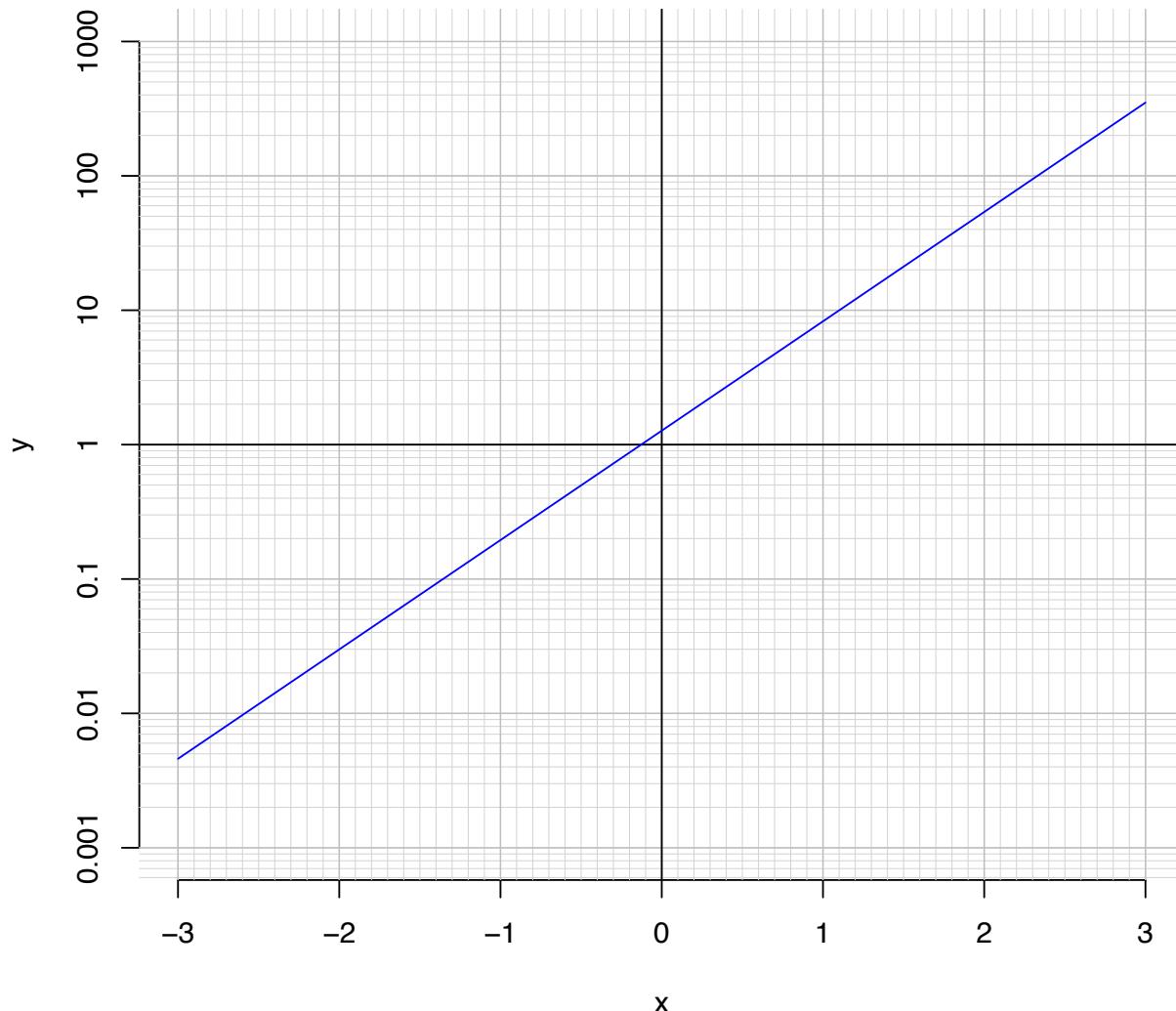


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$29 = \left(\frac{3}{7}\right) \cdot 10^{-5t/4}$$

3. (10 pts) An exponential function  $f(x) = 1.27 \cdot e^{1.87x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.87} \cdot \ln\left(\frac{x}{1.27}\right)$$

Using the plot above, evaluate  $f^{-1}(0.6)$ .

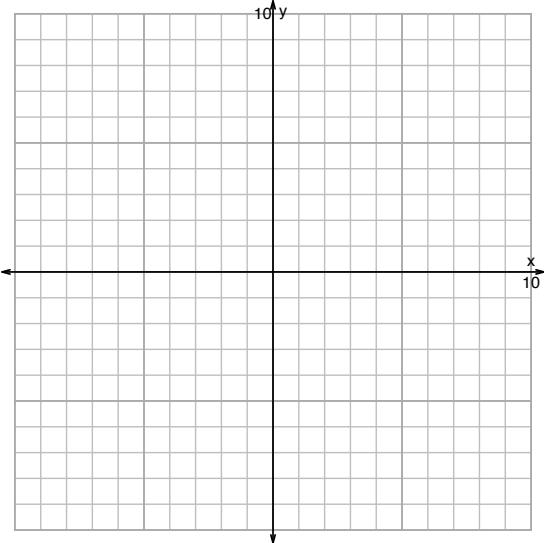
Name: \_\_\_\_\_

Date: \_\_\_\_\_

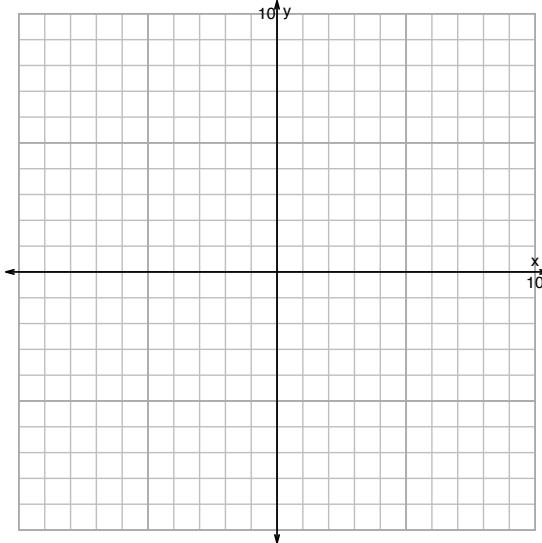
s18: EXP LOG (QUIZ v304)

1. (10 pts) Graph  $y = \log_2(x - 3) + 1$  and  $y = 2^{x-5} - 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 3) + 1$$



$$y = 2^{x-5} - 4$$

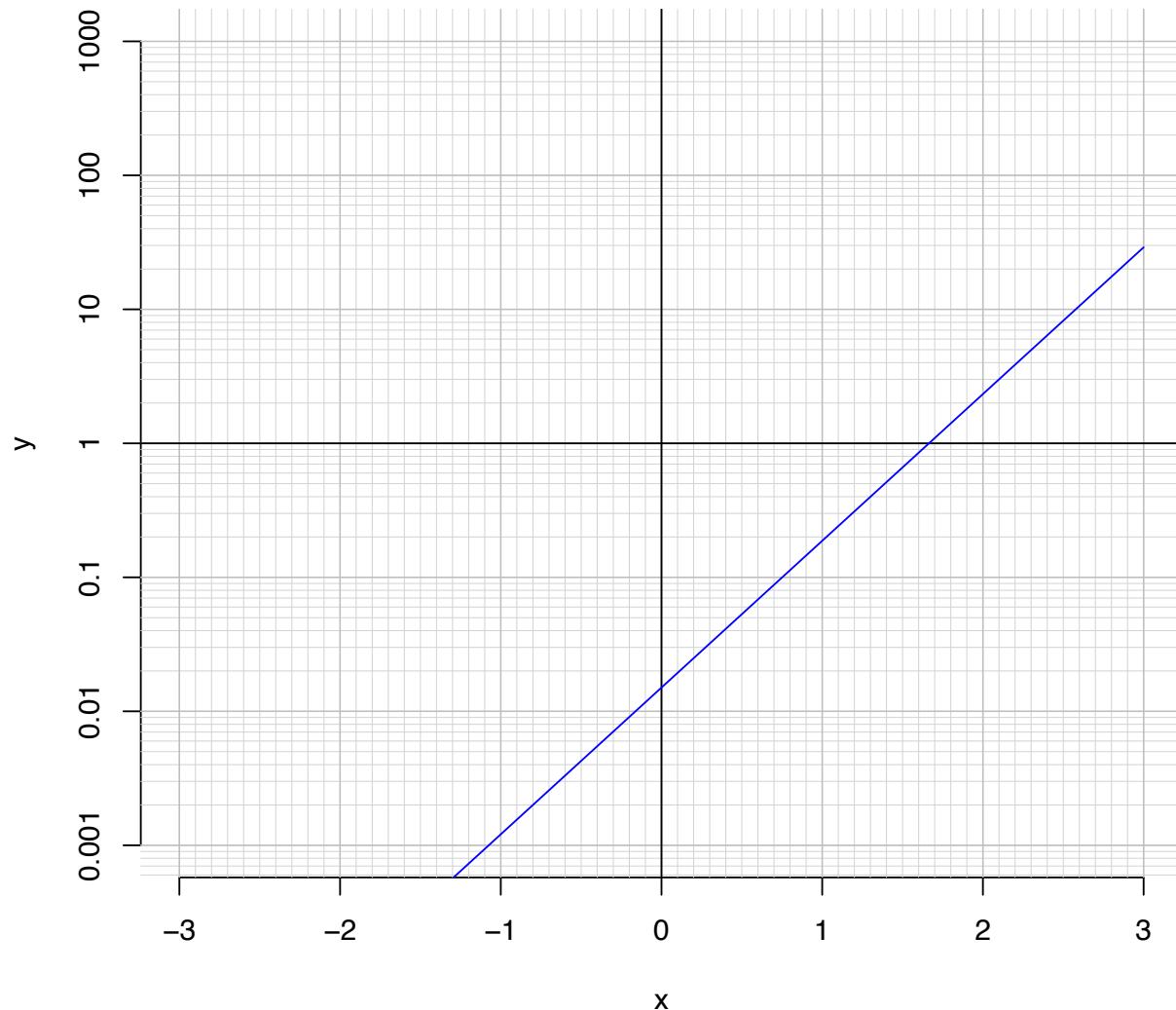


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$29 = \left(\frac{5}{4}\right) \cdot 2^{-7t/3}$$

3. (10 pts) An exponential function  $f(x) = 0.015 \cdot e^{2.52x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.1)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.52} \cdot \ln\left(\frac{x}{0.015}\right)$$

Using the plot above, evaluate  $f^{-1}(0.002)$ .

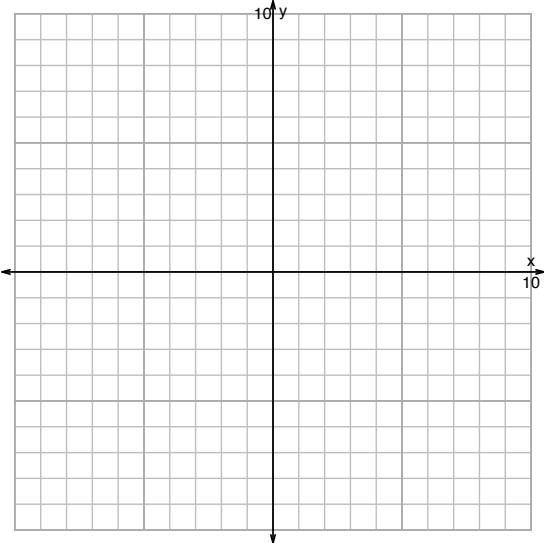
Name: \_\_\_\_\_

Date: \_\_\_\_\_

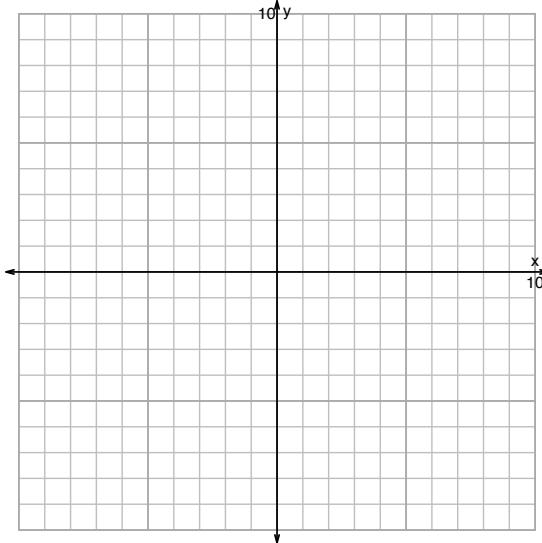
s18: EXP LOG (QUIZ v305)

1. (10 pts) Graph  $y = \log_2(x - 6) - 2$  and  $y = 2^{x-1} + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 6) - 2$$



$$y = 2^{x-1} + 4$$

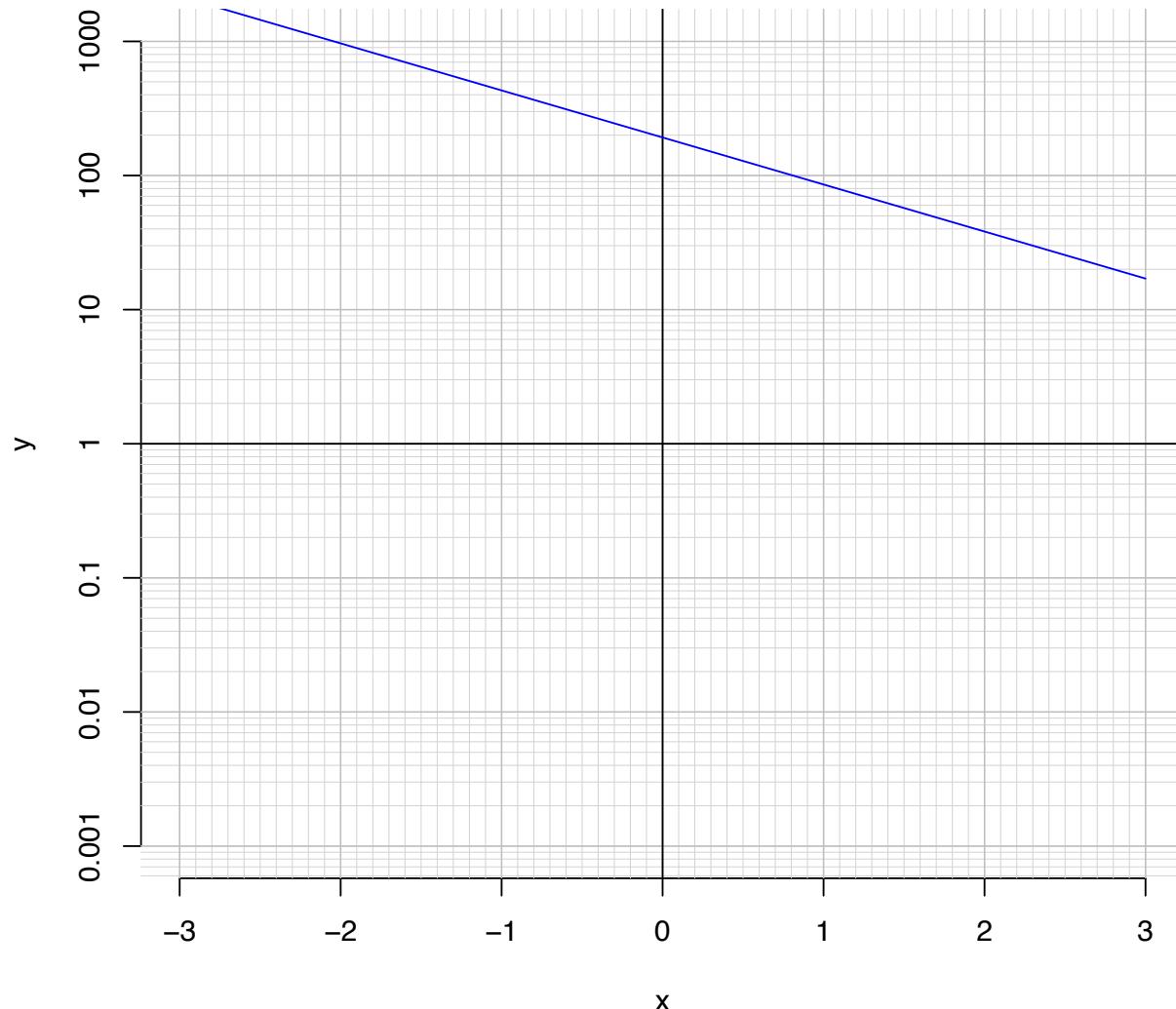


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-4}{5}\right) \cdot 2^{7t/3}$$

3. (10 pts) An exponential function  $f(x) = 192 \cdot e^{-0.808x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.3)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{0.808} \cdot \ln\left(\frac{x}{192}\right)$$

Using the plot above, evaluate  $f^{-1}(700)$ .

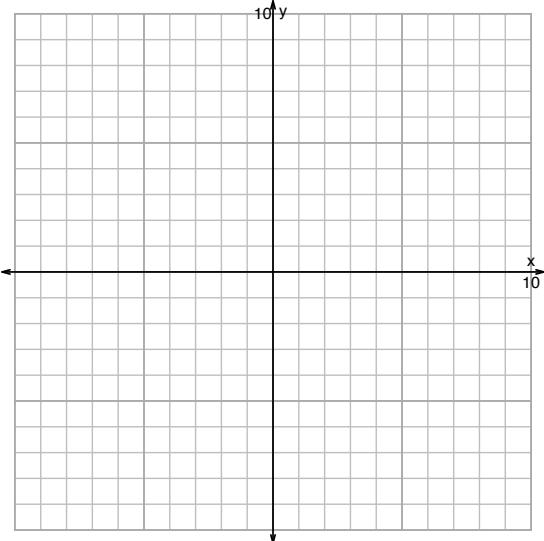
Name: \_\_\_\_\_

Date: \_\_\_\_\_

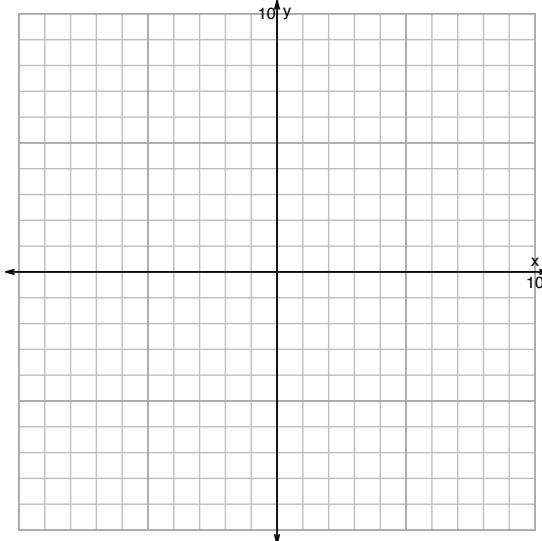
s18: EXP LOG (QUIZ v306)

1. (10 pts) Graph  $y = 2^{x+1} - 3$  and  $y = \log_2(x + 2) - 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+1} - 3$$



$$y = \log_2(x + 2) - 1$$

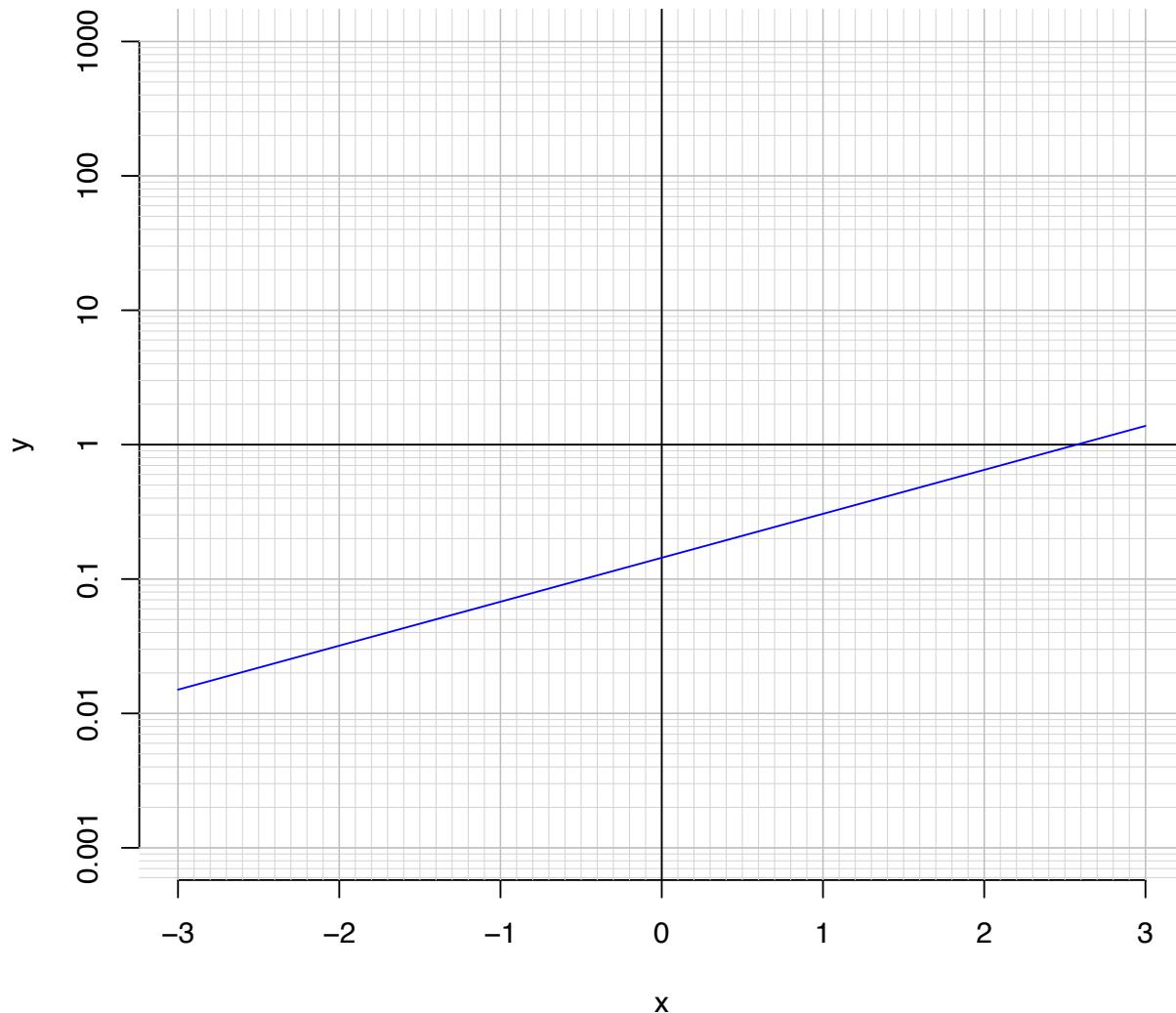


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-29 = \left(\frac{-5}{4}\right) \cdot 2^{-7t/3}$$

3. (10 pts) An exponential function  $f(x) = 0.144 \cdot e^{0.753x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-1.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{0.753} \cdot \ln\left(\frac{x}{0.144}\right)$$

Using the plot above, evaluate  $f^{-1}(0.7)$ .

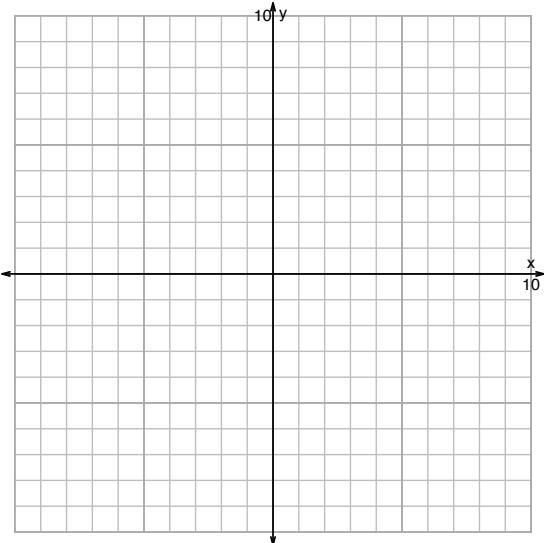
Name: \_\_\_\_\_

Date: \_\_\_\_\_

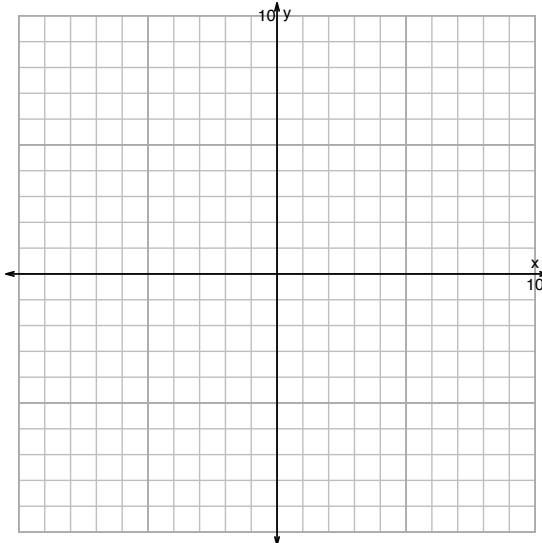
s18: EXP LOG (QUIZ v307)

1. (10 pts) Graph  $y = 2^{x+2} + 6$  and  $y = \log_2(x + 6) - 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+2} + 6$$



$$y = \log_2(x + 6) - 1$$

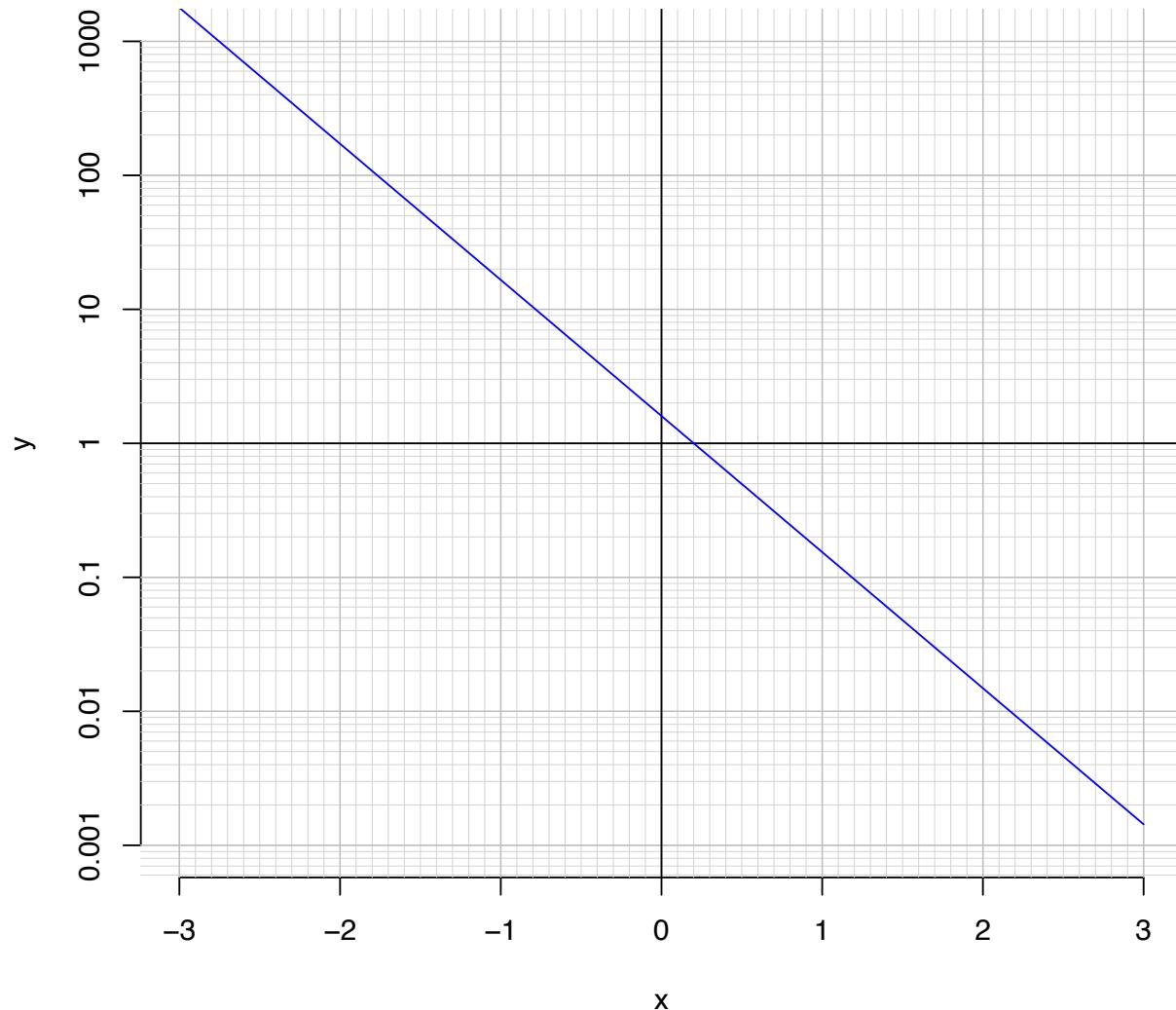


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-29 = \left(\frac{-7}{3}\right) \cdot 2^{-5t/4}$$

3. (10 pts) An exponential function  $f(x) = 1.6 \cdot e^{-2.34x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{2.34} \cdot \ln\left(\frac{x}{1.6}\right)$$

Using the plot above, evaluate  $f^{-1}(700)$ .

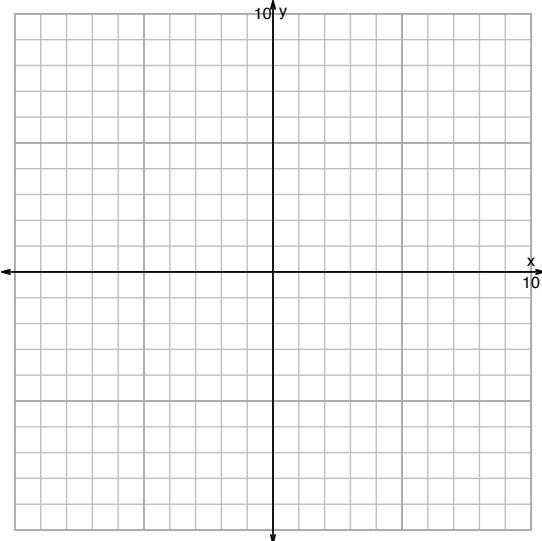
Name: \_\_\_\_\_

Date: \_\_\_\_\_

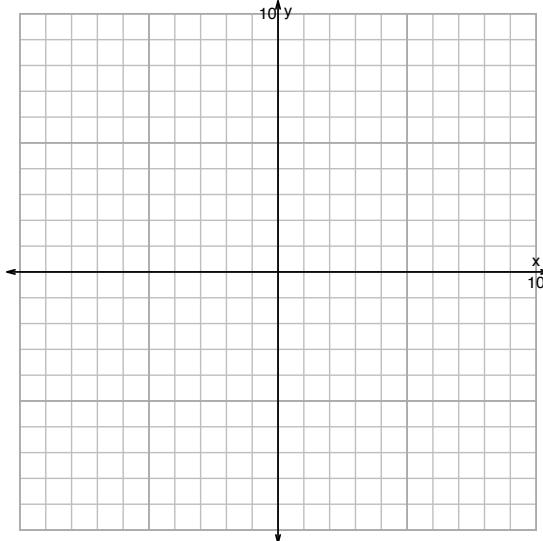
s18: EXP LOG (QUIZ v308)

1. (10 pts) Graph  $y = \log_2(x - 3) - 5$  and  $y = 2^{x-5} + 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 3) - 5$$



$$y = 2^{x-5} + 2$$

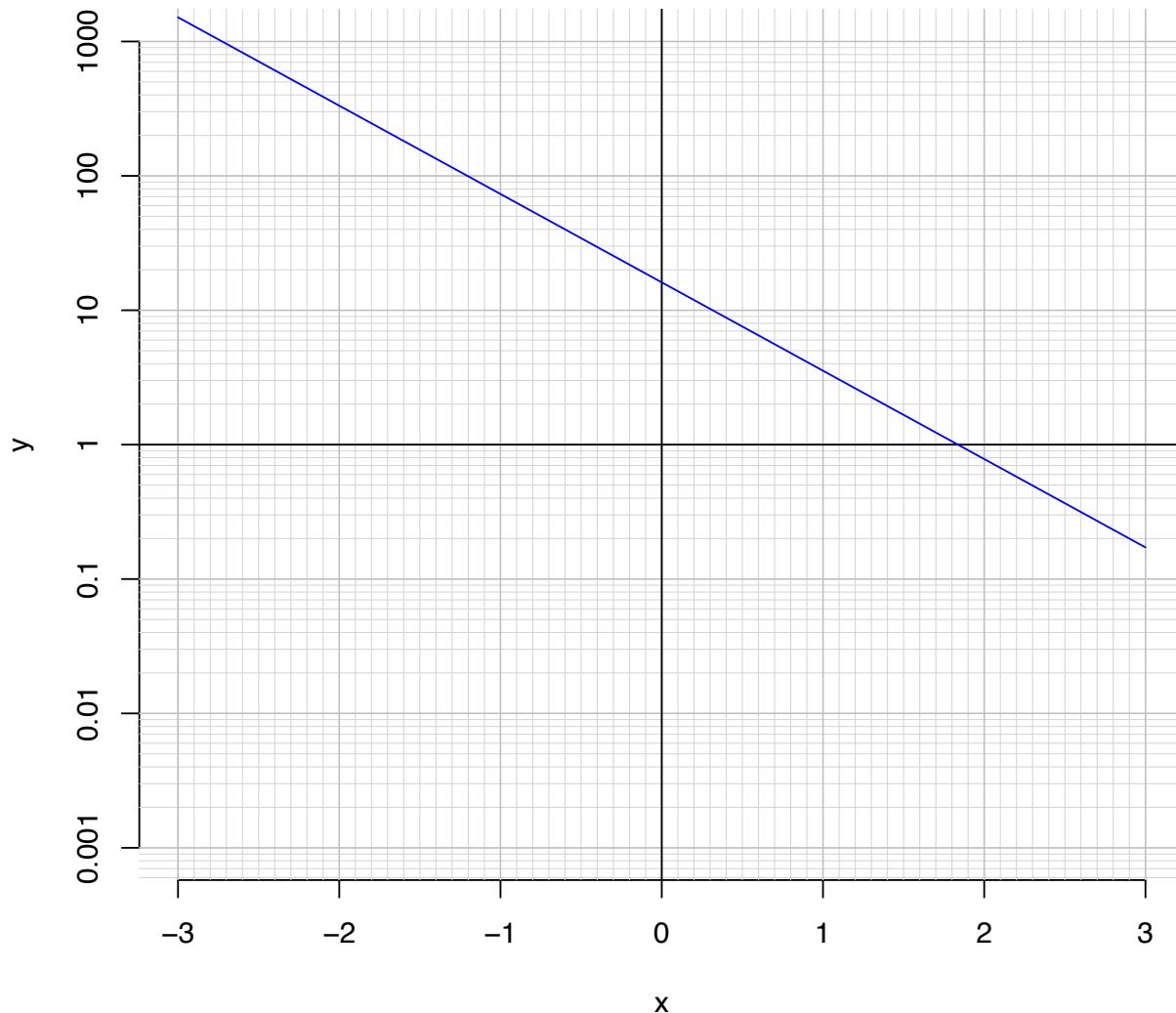


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-4}{3}\right) \cdot 10^{-7t/5}$$

3. (10 pts) An exponential function  $f(x) = 16.1 \cdot e^{-1.51x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-0.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.51} \cdot \ln\left(\frac{x}{16.1}\right)$$

Using the plot above, evaluate  $f^{-1}(0.2)$ .

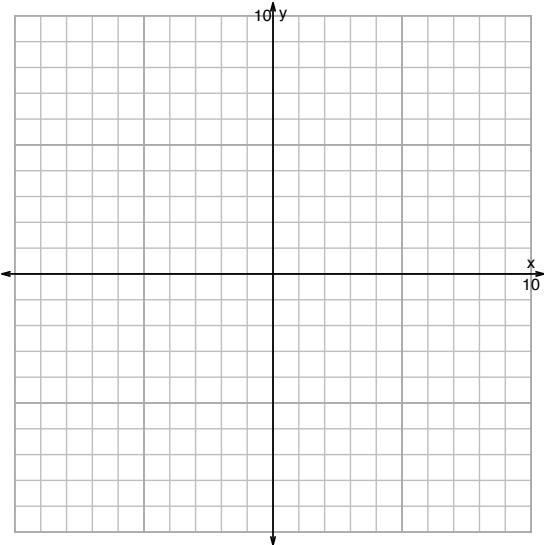
Name: \_\_\_\_\_

Date: \_\_\_\_\_

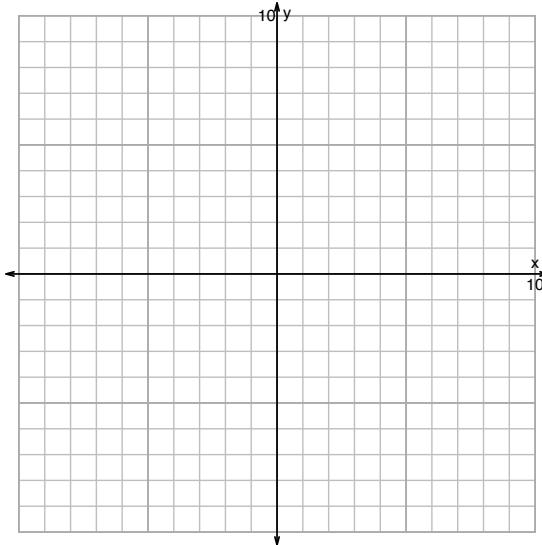
s18: EXP LOG (QUIZ v309)

1. (10 pts) Graph  $y = 2^{x+4} + 5$  and  $y = \log_2(x + 4) - 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+4} + 5$$



$$y = \log_2(x + 4) - 5$$

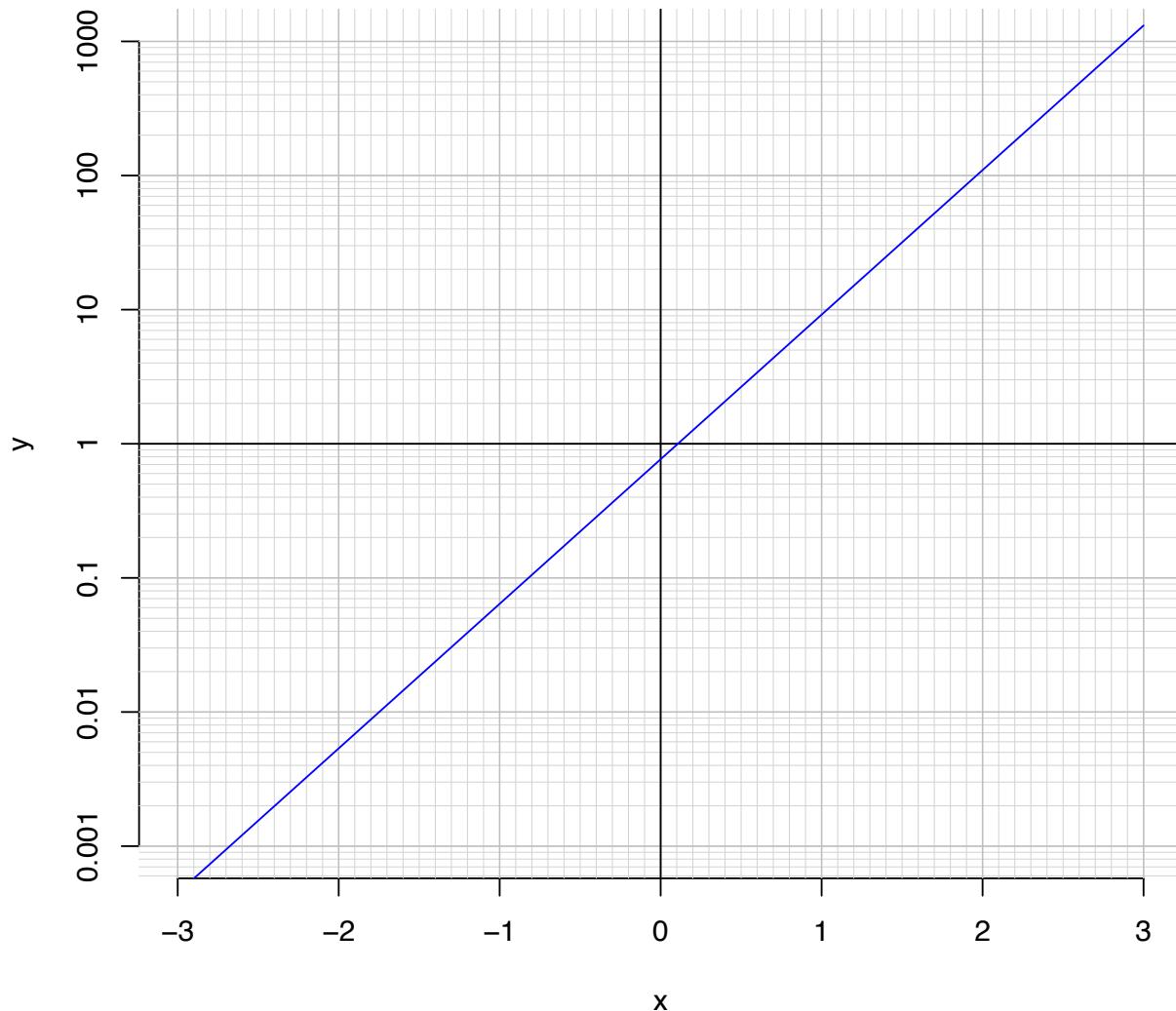


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$13 = \left(\frac{3}{5}\right) \cdot 10^{-7t/4}$$

3. (10 pts) An exponential function  $f(x) = 0.767 \cdot e^{2.48x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-1.1)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.48} \cdot \ln\left(\frac{x}{0.767}\right)$$

Using the plot above, evaluate  $f^{-1}(800)$ .

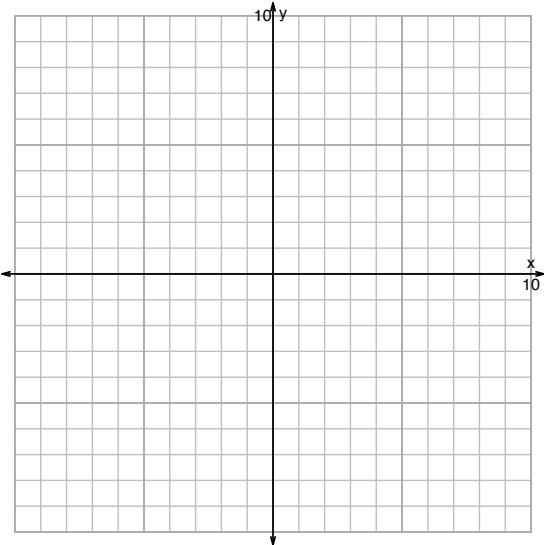
Name: \_\_\_\_\_

Date: \_\_\_\_\_

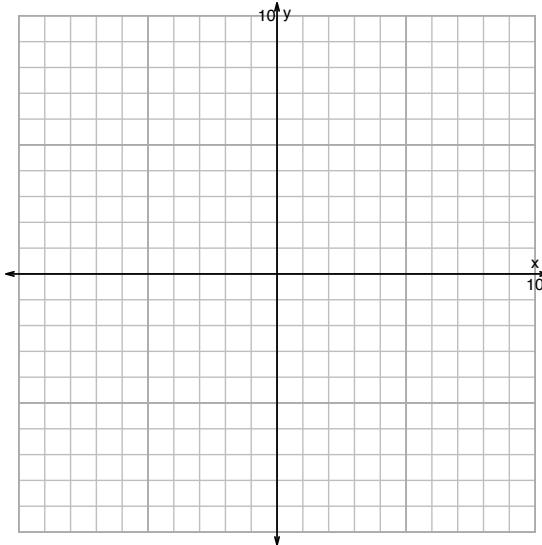
s18: EXP LOG (QUIZ v310)

1. (10 pts) Graph  $y = 2^{x-1} + 6$  and  $y = \log_2(x - 3) + 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-1} + 6$$



$$y = \log_2(x - 3) + 5$$

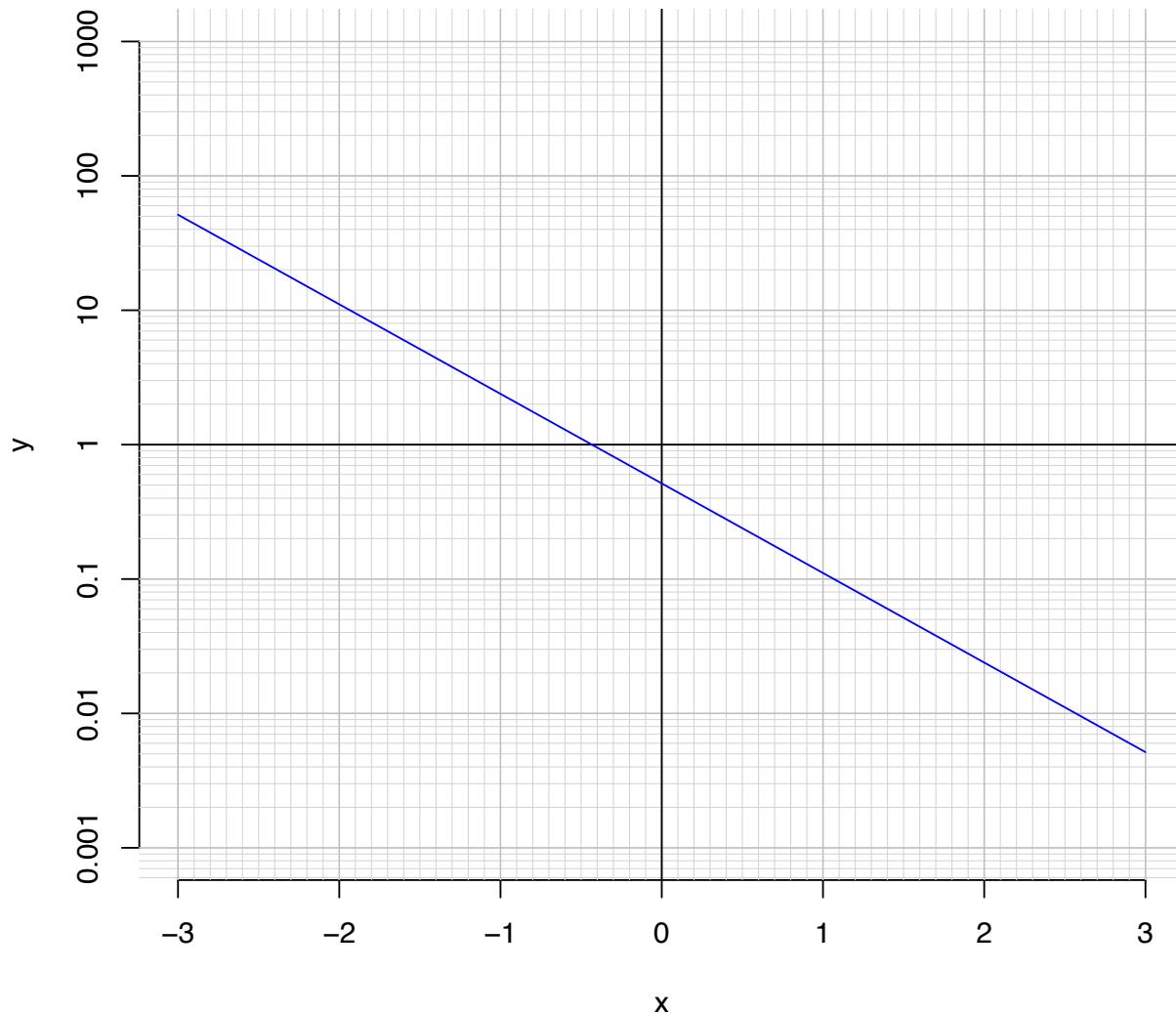


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-19 = \left(\frac{-4}{5}\right) \cdot 2^{7t/3}$$

3. (10 pts) An exponential function  $f(x) = 0.515 \cdot e^{-1.53x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.3)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.53} \cdot \ln\left(\frac{x}{0.515}\right)$$

Using the plot above, evaluate  $f^{-1}(0.6)$ .

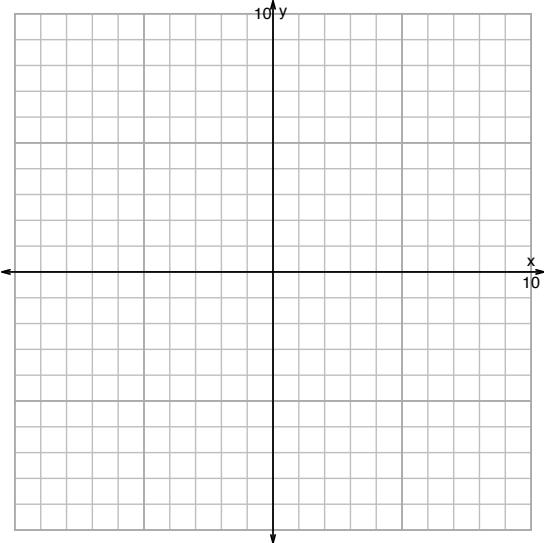
Name: \_\_\_\_\_

Date: \_\_\_\_\_

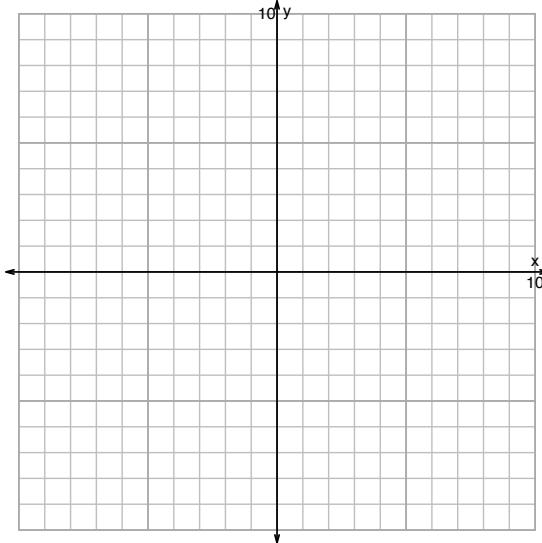
s18: EXP LOG (QUIZ v311)

1. (10 pts) Graph  $y = \log_2(x + 4) + 5$  and  $y = 2^{x+3} - 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 4) + 5$$



$$y = 2^{x+3} - 2$$

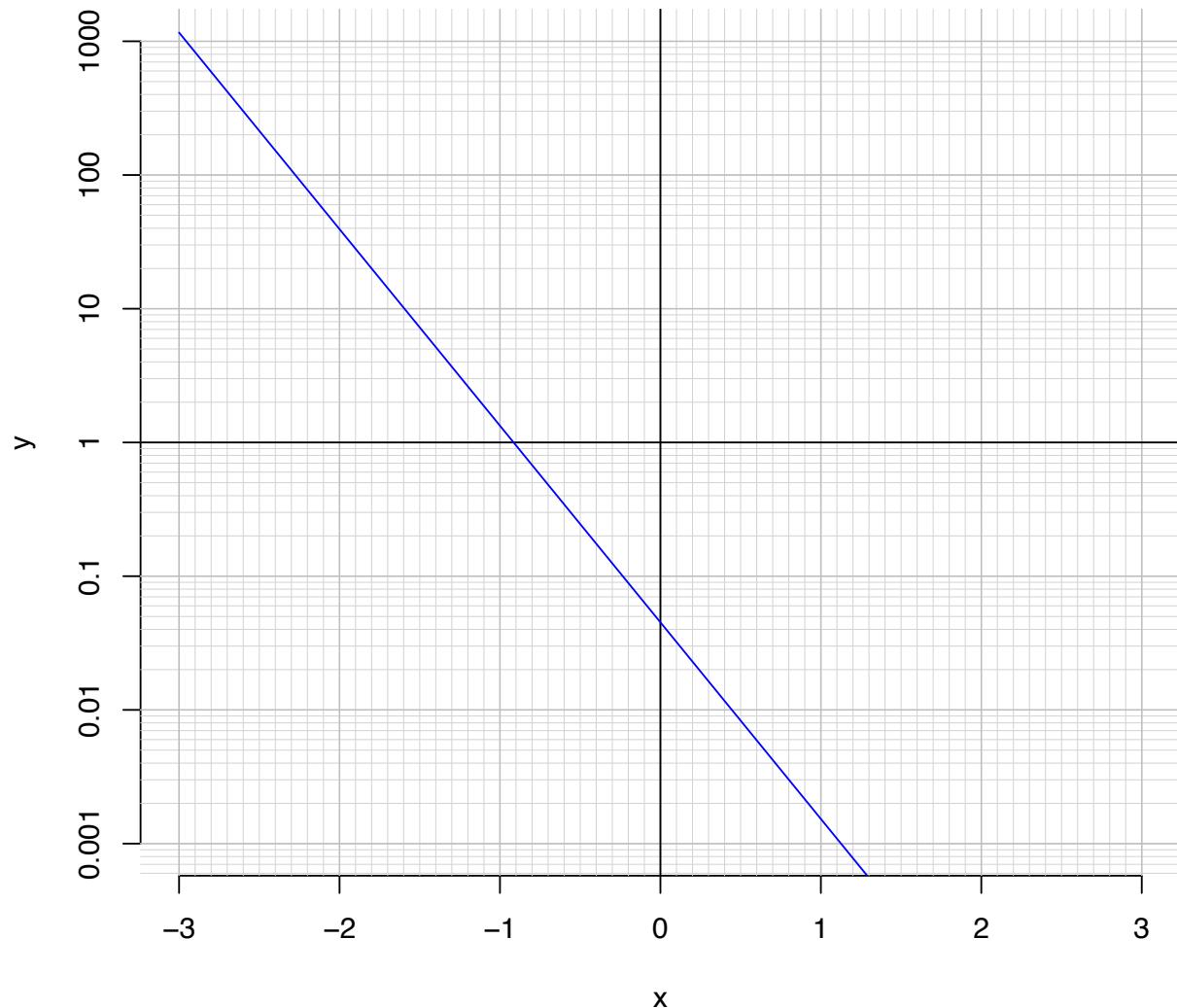


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-5}{7}\right) \cdot 2^{-4t/3}$$

3. (10 pts) An exponential function  $f(x) = 0.0452 \cdot e^{-3.39x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{3.39} \cdot \ln\left(\frac{x}{0.0452}\right)$$

Using the plot above, evaluate  $f^{-1}(20)$ .

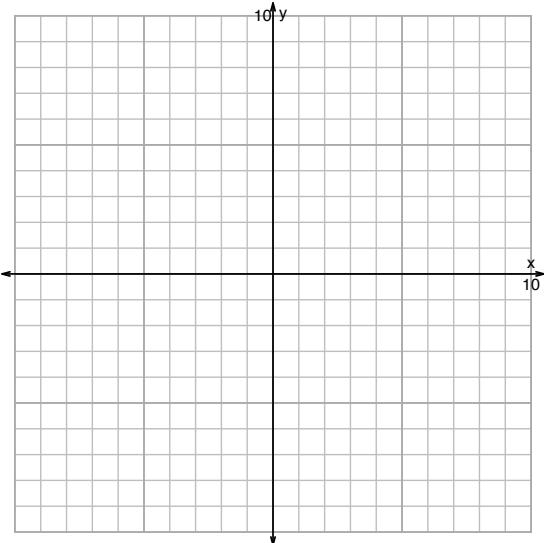
Name: \_\_\_\_\_

Date: \_\_\_\_\_

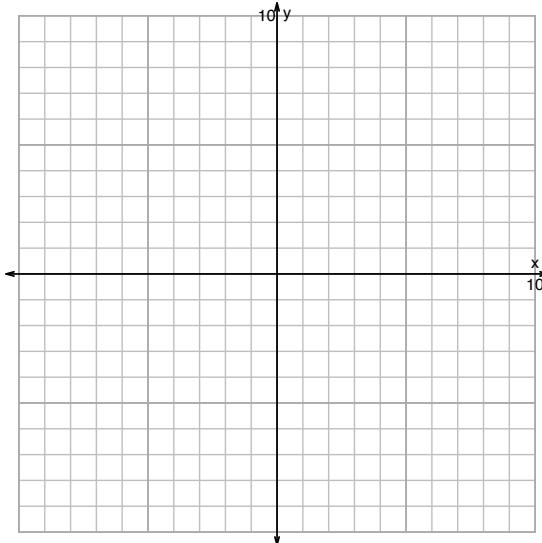
s18: EXP LOG (QUIZ v312)

1. (10 pts) Graph  $y = 2^{x-2} + 6$  and  $y = \log_2(x+5) + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-2} + 6$$



$$y = \log_2(x+5) + 4$$

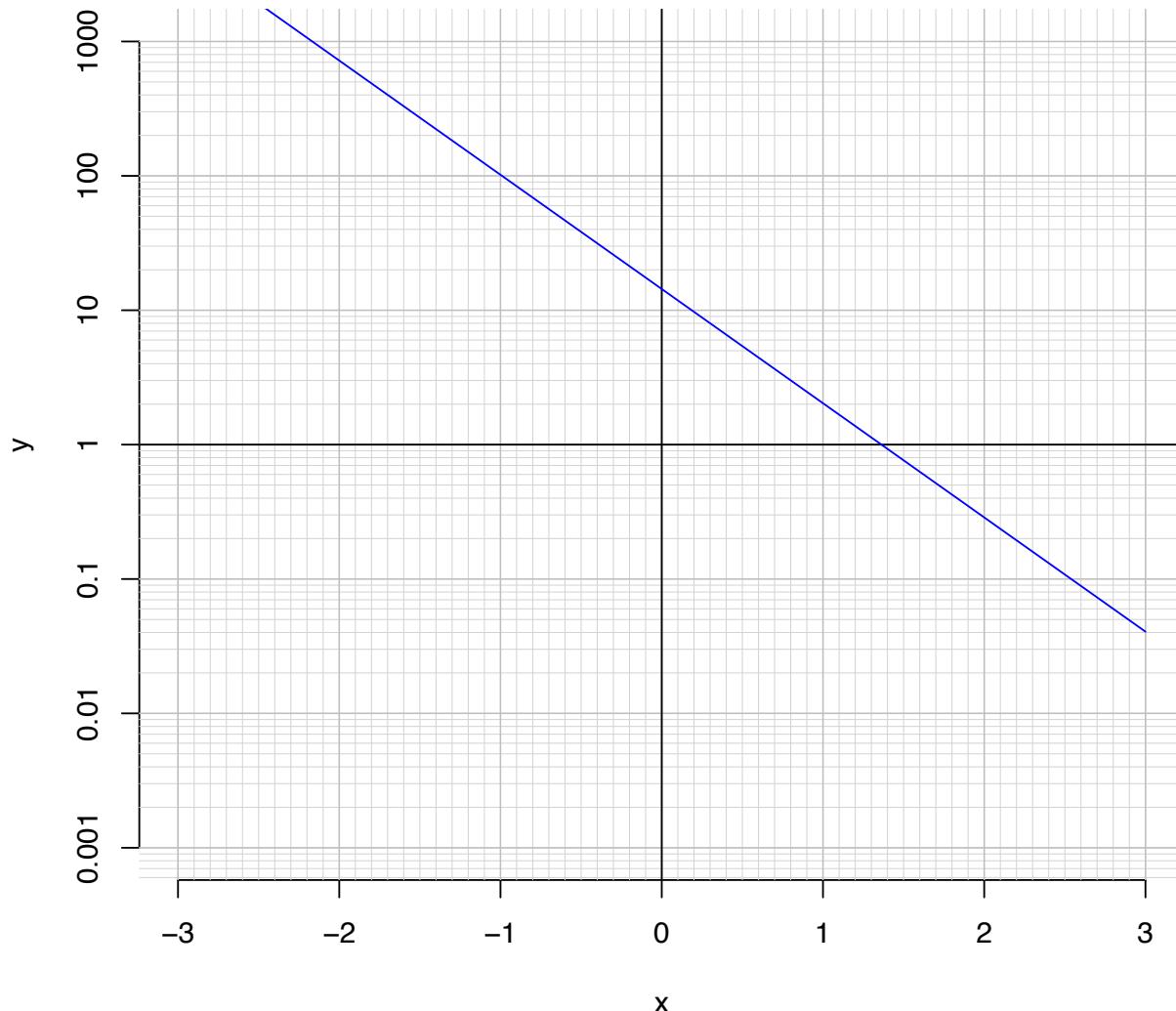


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-3}{4}\right) \cdot 2^{7t/5}$$

3. (10 pts) An exponential function  $f(x) = 14.4 \cdot e^{-1.96x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.8)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.96} \cdot \ln\left(\frac{x}{14.4}\right)$$

Using the plot above, evaluate  $f^{-1}(8)$ .

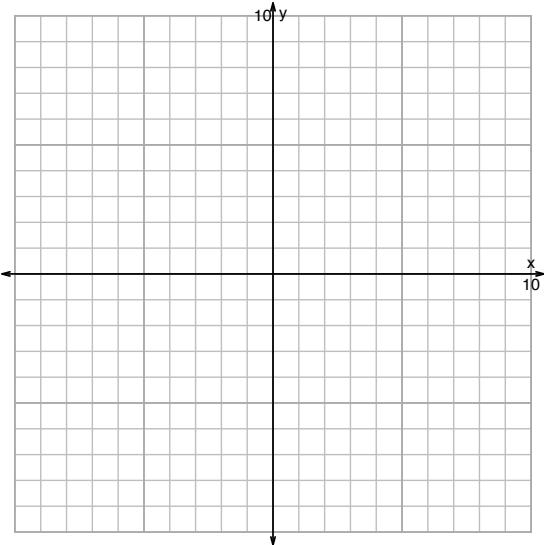
Name: \_\_\_\_\_

Date: \_\_\_\_\_

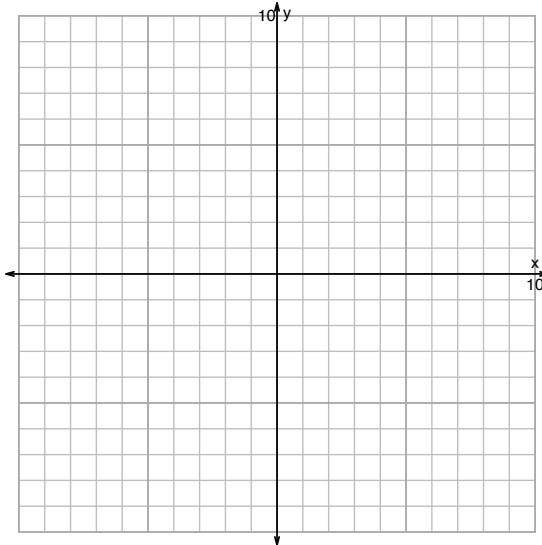
s18: EXP LOG (QUIZ v313)

1. (10 pts) Graph  $y = 2^{x+4} - 1$  and  $y = \log_2(x + 6) + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+4} - 1$$



$$y = \log_2(x + 6) + 1$$

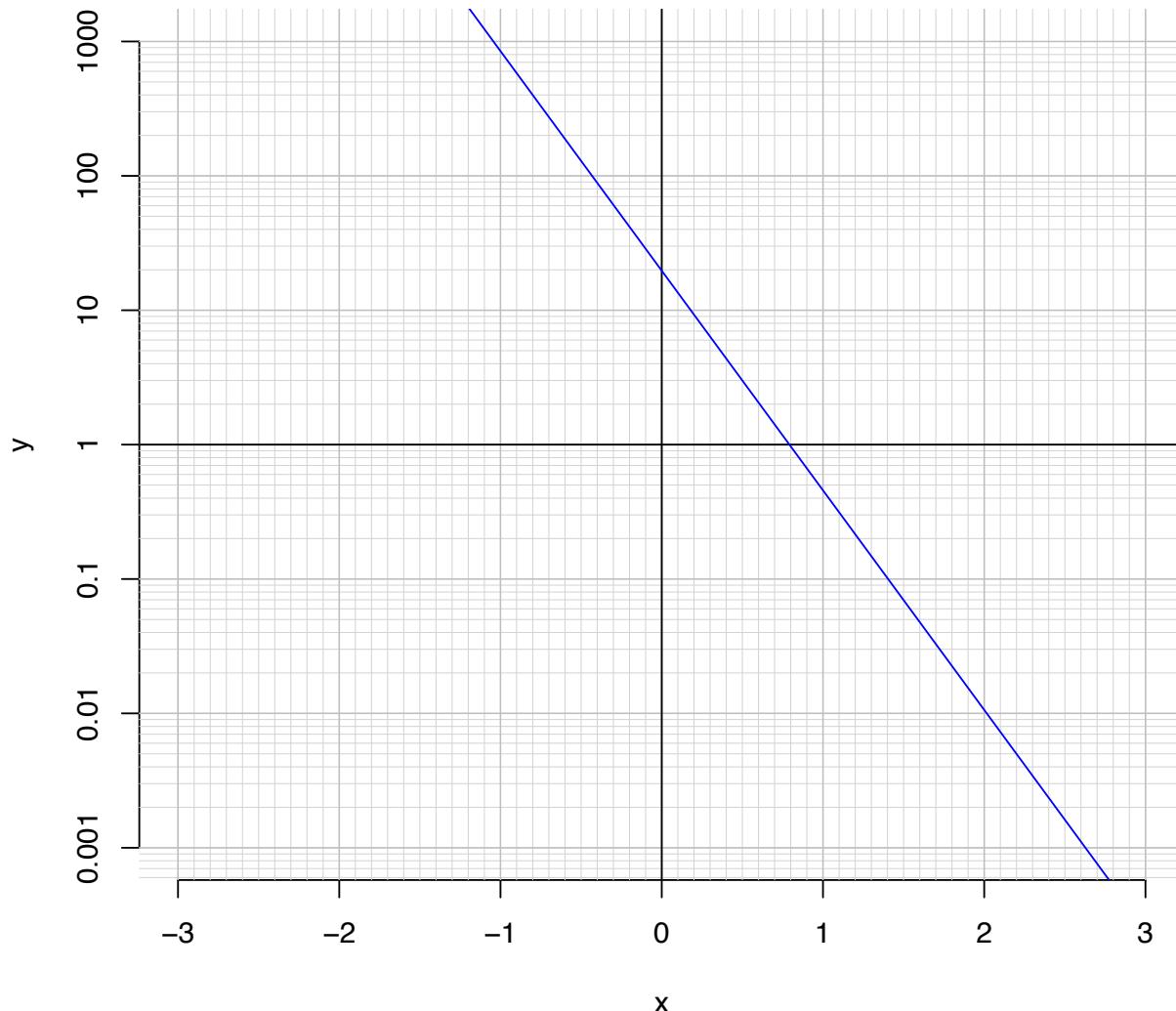


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-3}{5}\right) \cdot 10^{-4t/7}$$

3. (10 pts) An exponential function  $f(x) = 19.7 \cdot e^{-3.76x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.2)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{3.76} \cdot \ln\left(\frac{x}{19.7}\right)$$

Using the plot above, evaluate  $f^{-1}(3)$ .

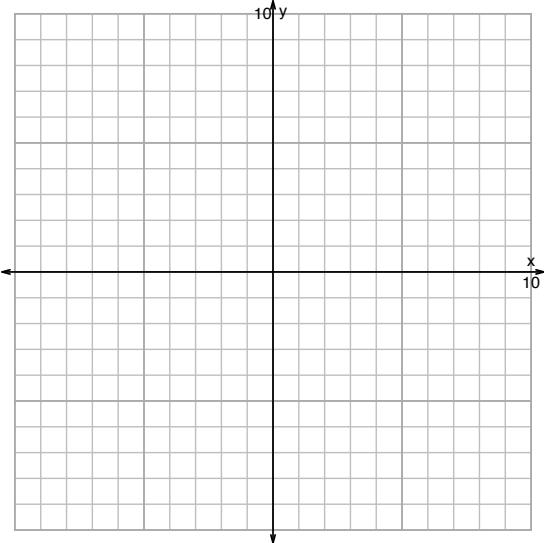
Name: \_\_\_\_\_

Date: \_\_\_\_\_

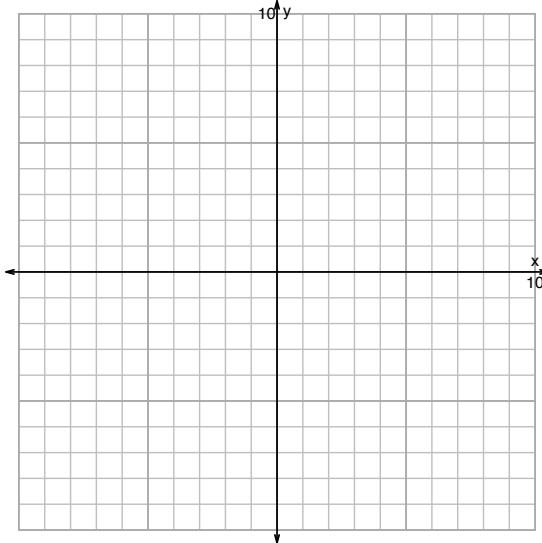
s18: EXP LOG (QUIZ v314)

1. (10 pts) Graph  $y = \log_2(x - 3) - 2$  and  $y = 2^{x+6} + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 3) - 2$$



$$y = 2^{x+6} + 4$$

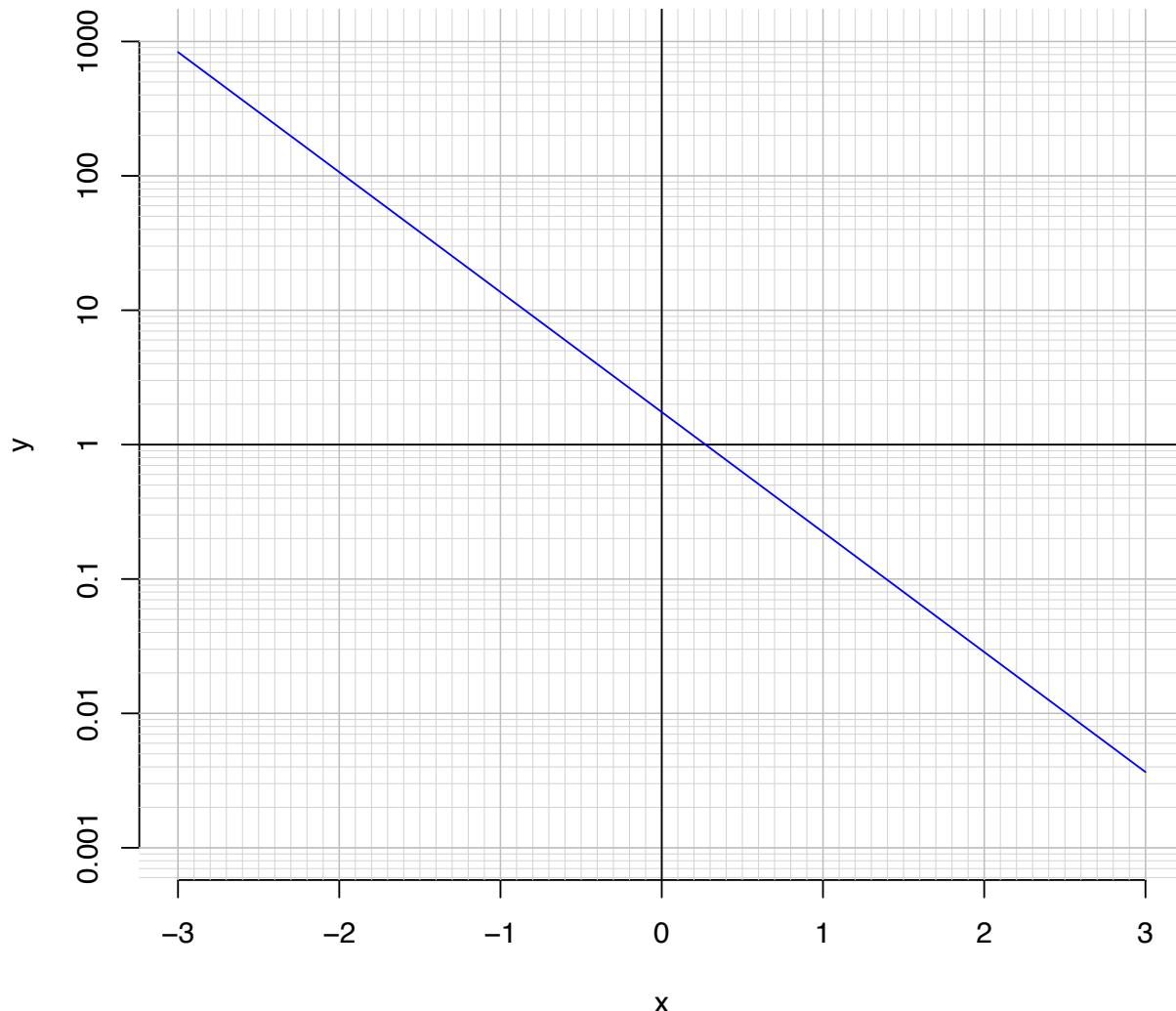


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-17 = \left(\frac{-4}{7}\right) \cdot 2^{-5t/3}$$

3. (10 pts) An exponential function  $f(x) = 1.75 \cdot e^{-2.06x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.5)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{2.06} \cdot \ln\left(\frac{x}{1.75}\right)$$

Using the plot above, evaluate  $f^{-1}(6)$ .

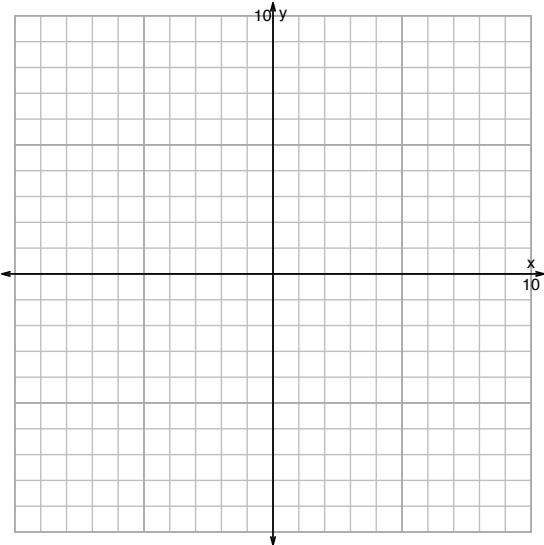
Name: \_\_\_\_\_

Date: \_\_\_\_\_

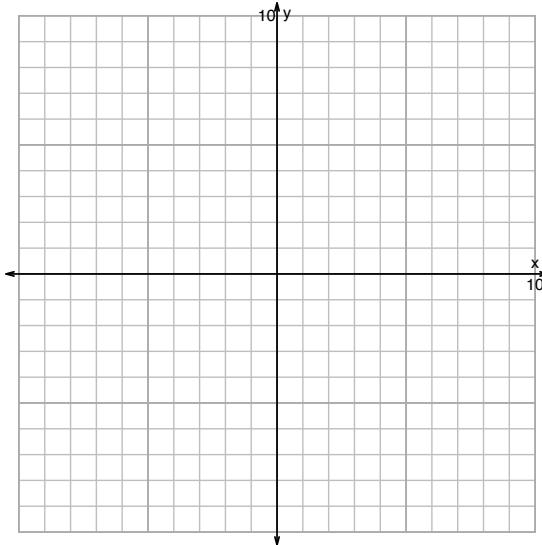
s18: EXP LOG (QUIZ v315)

1. (10 pts) Graph  $y = 2^{x+5} + 2$  and  $y = \log_2(x + 6) + 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+5} + 2$$



$$y = \log_2(x + 6) + 5$$

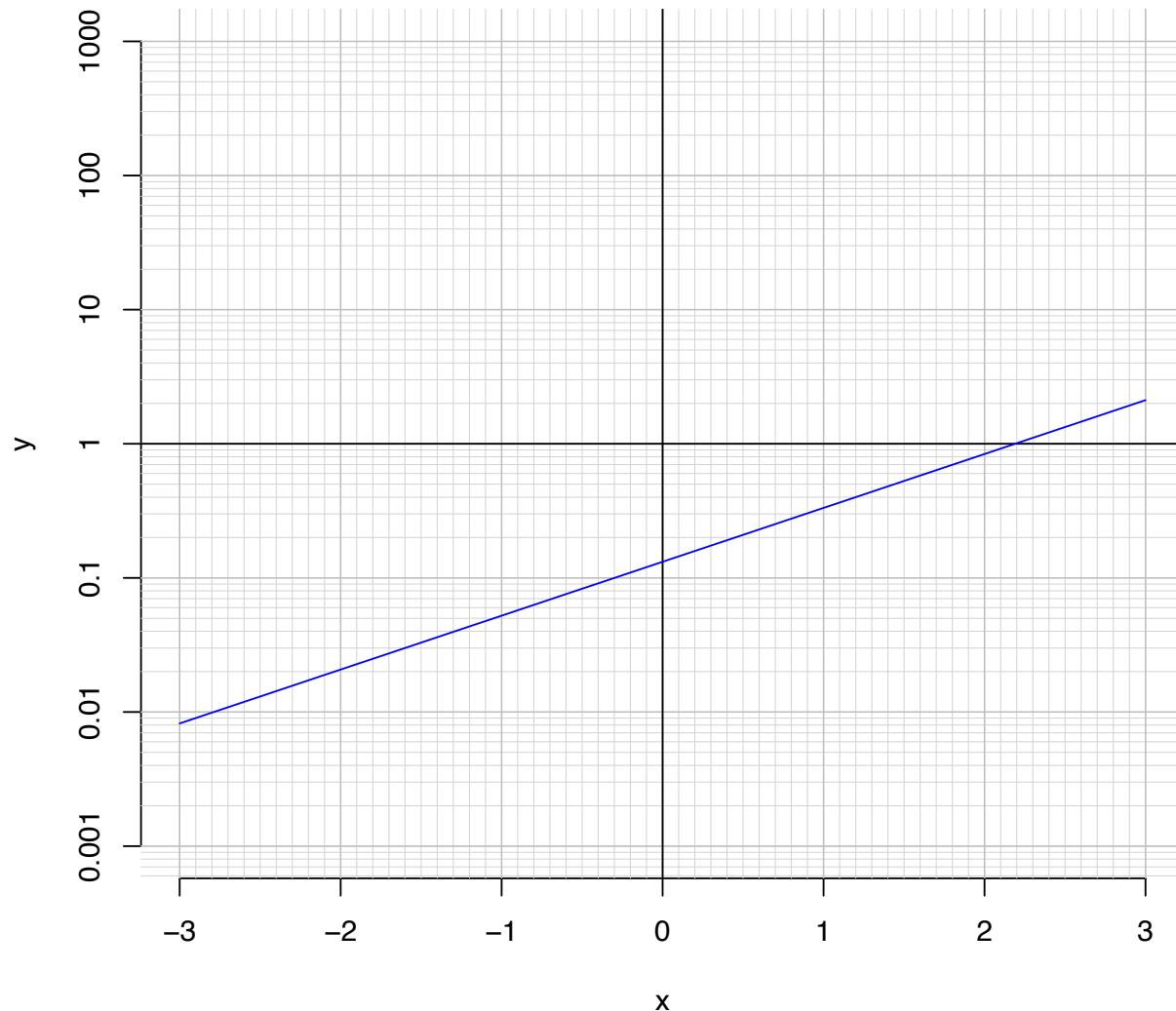


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-29 = \left(\frac{-5}{7}\right) \cdot 10^{3t/4}$$

3. (10 pts) An exponential function  $f(x) = 0.132 \cdot e^{0.925x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.2)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{0.925} \cdot \ln\left(\frac{x}{0.132}\right)$$

Using the plot above, evaluate  $f^{-1}(0.03)$ .

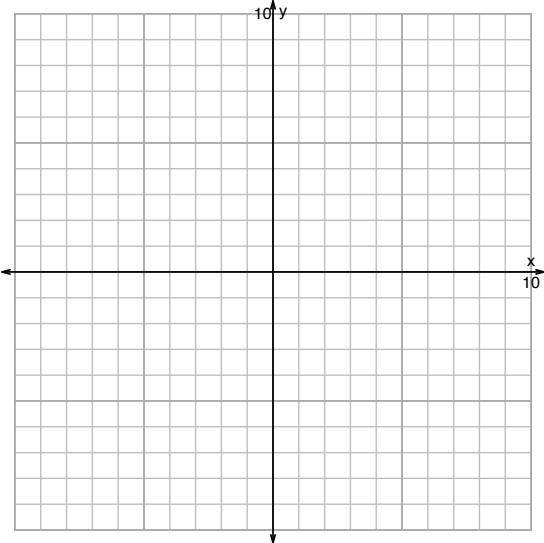
Name: \_\_\_\_\_

Date: \_\_\_\_\_

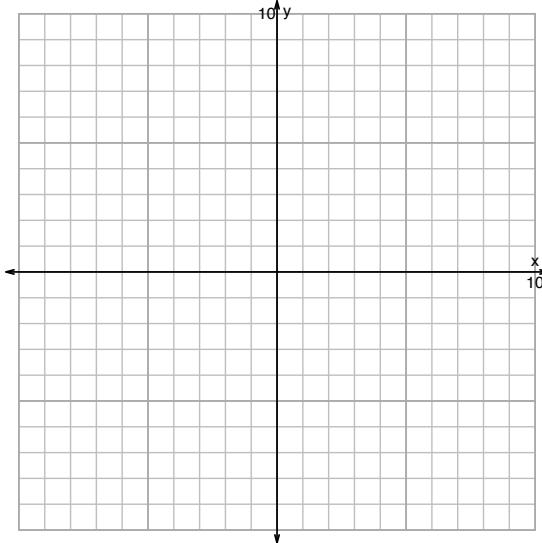
s18: EXP LOG (QUIZ v316)

1. (10 pts) Graph  $y = \log_2(x + 3) + 5$  and  $y = 2^{x-4} - 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 3) + 5$$



$$y = 2^{x-4} - 1$$

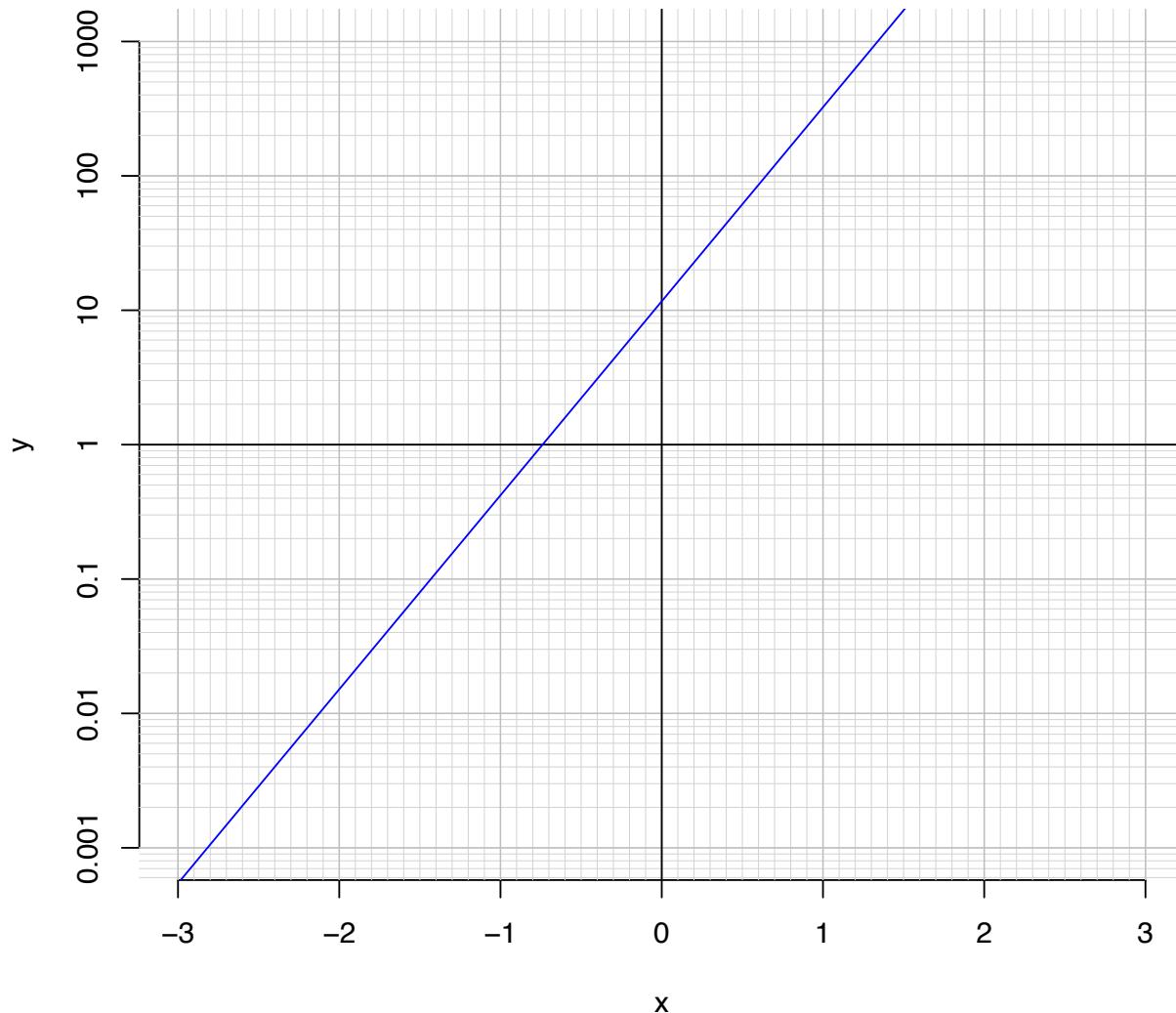


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-7}{4}\right) \cdot 2^{3t/5}$$

3. (10 pts) An exponential function  $f(x) = 11.7 \cdot e^{3.32x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.4)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{3.32} \cdot \ln\left(\frac{x}{11.7}\right)$$

Using the plot above, evaluate  $f^{-1}(6)$ .

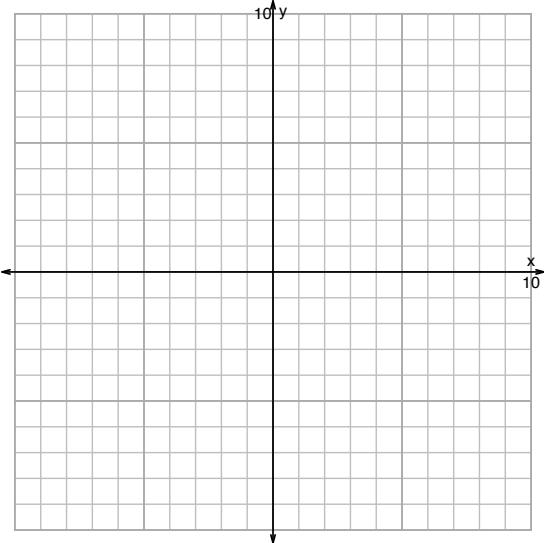
Name: \_\_\_\_\_

Date: \_\_\_\_\_

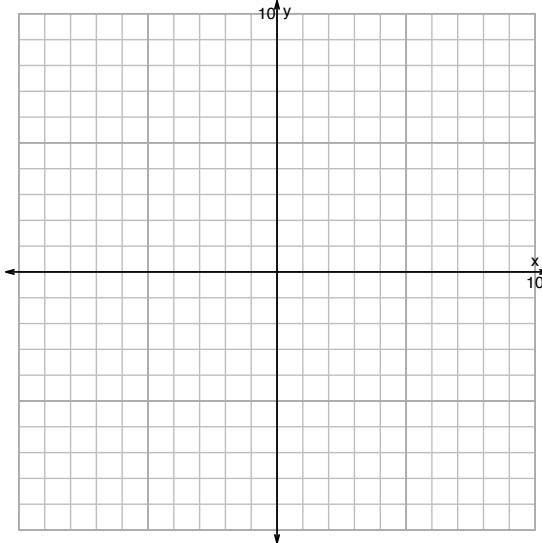
s18: EXP LOG (QUIZ v317)

1. (10 pts) Graph  $y = 2^{x-4} - 5$  and  $y = \log_2(x - 6) + 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-4} - 5$$



$$y = \log_2(x - 6) + 2$$

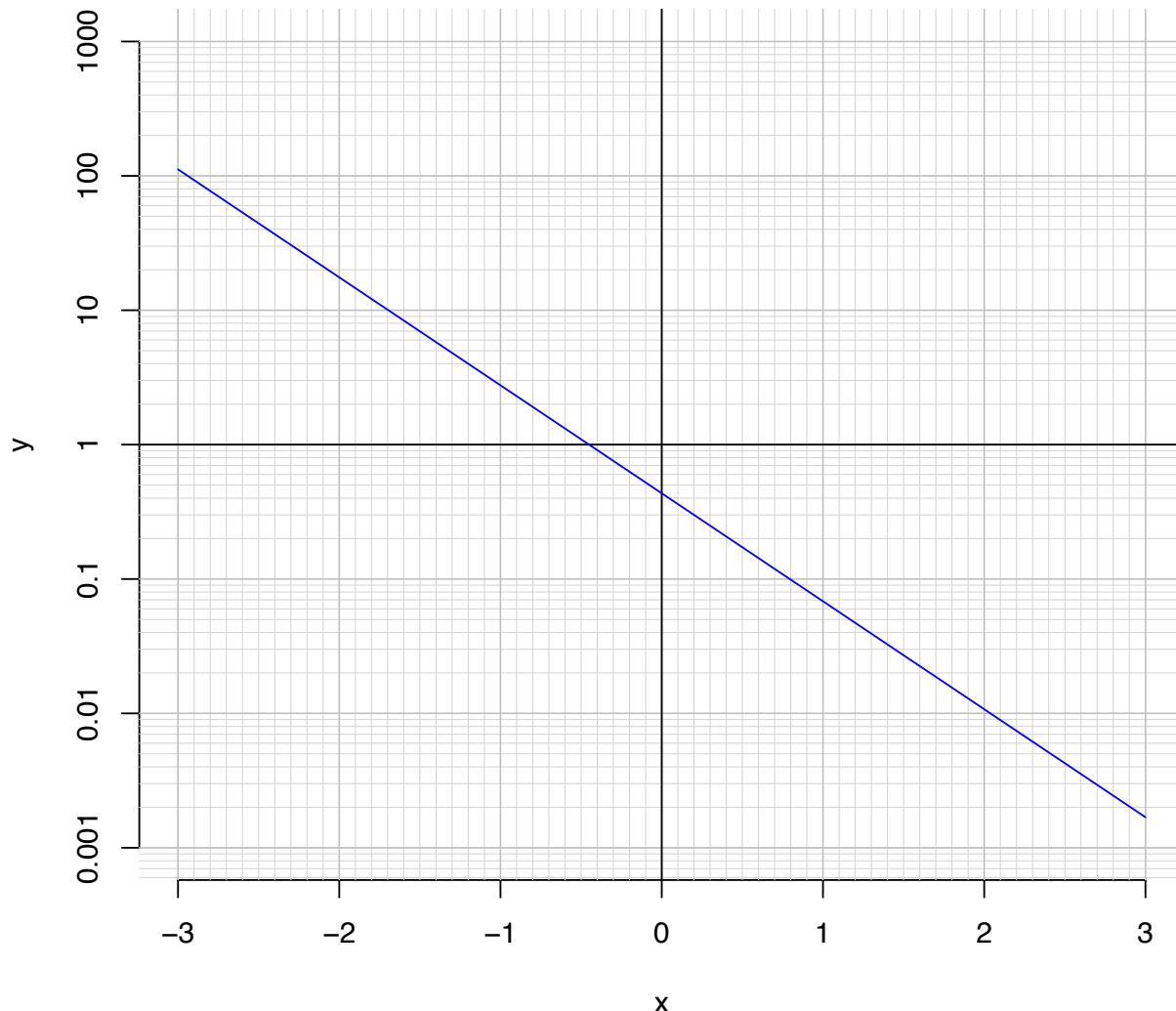


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$23 = \left(\frac{5}{7}\right) \cdot 2^{4t/3}$$

3. (10 pts) An exponential function  $f(x) = 0.434 \cdot e^{-1.85x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-1.2)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.85} \cdot \ln\left(\frac{x}{0.434}\right)$$

Using the plot above, evaluate  $f^{-1}(0.3)$ .

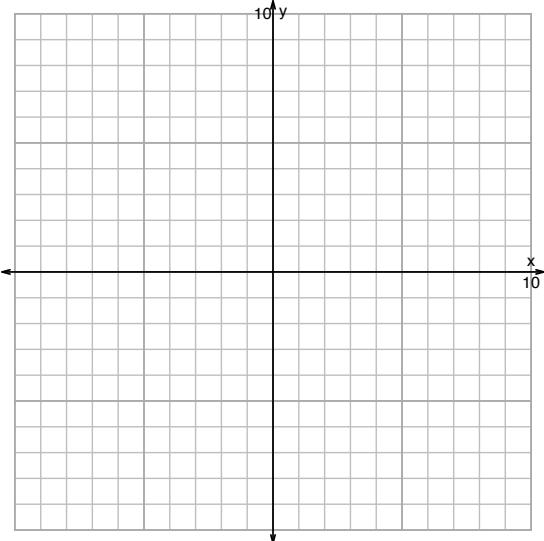
Name: \_\_\_\_\_

Date: \_\_\_\_\_

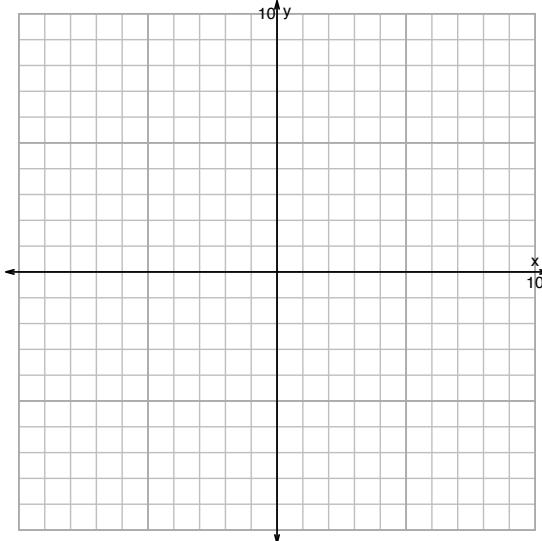
s18: EXP LOG (QUIZ v318)

1. (10 pts) Graph  $y = \log_2(x - 4) + 3$  and  $y = 2^{x-3} + 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 4) + 3$$



$$y = 2^{x-3} + 2$$

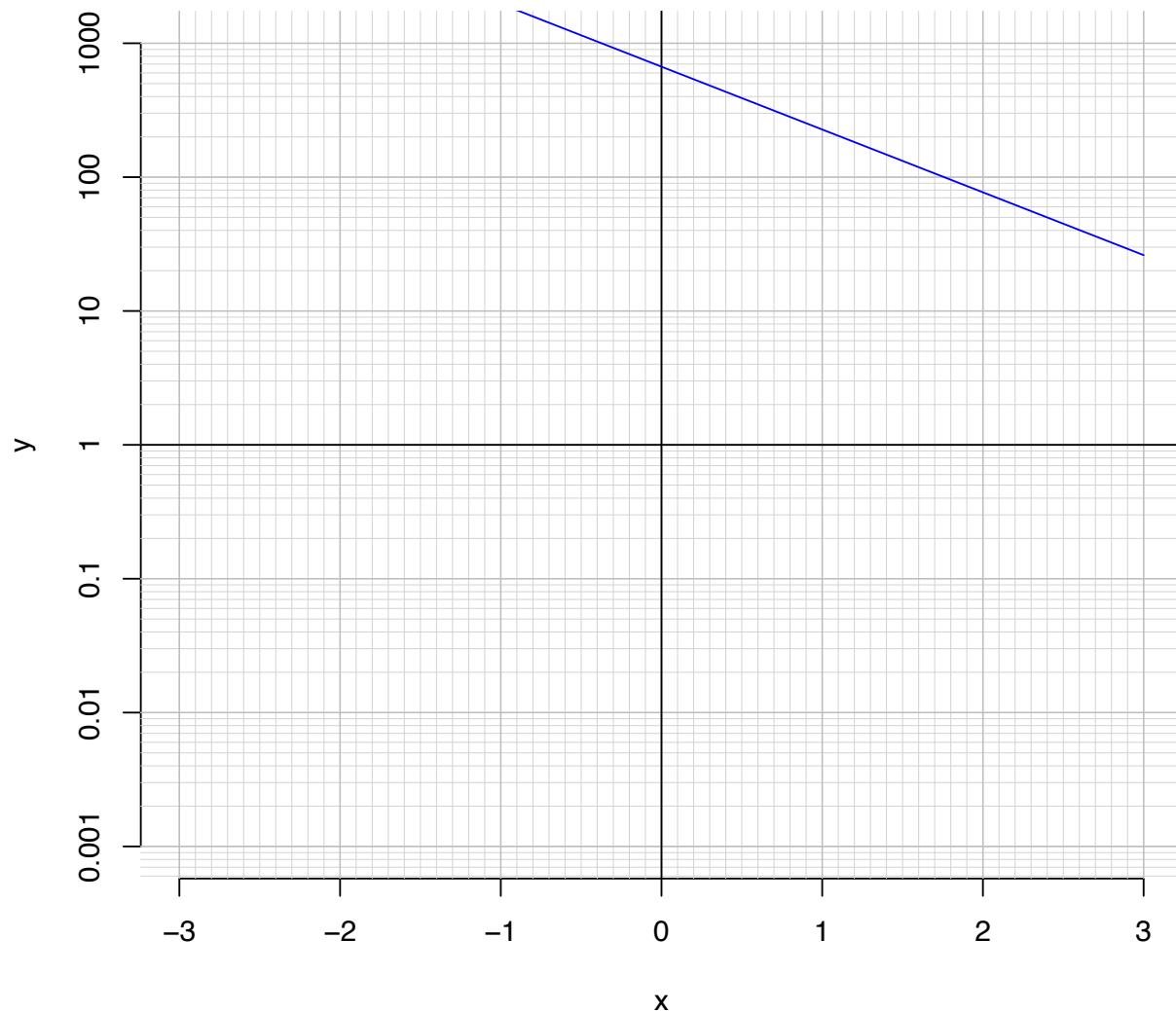


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-5}{3}\right) \cdot 10^{7t/4}$$

3. (10 pts) An exponential function  $f(x) = 668 \cdot e^{-1.08x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(0.1)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.08} \cdot \ln\left(\frac{x}{668}\right)$$

Using the plot above, evaluate  $f^{-1}(50)$ .

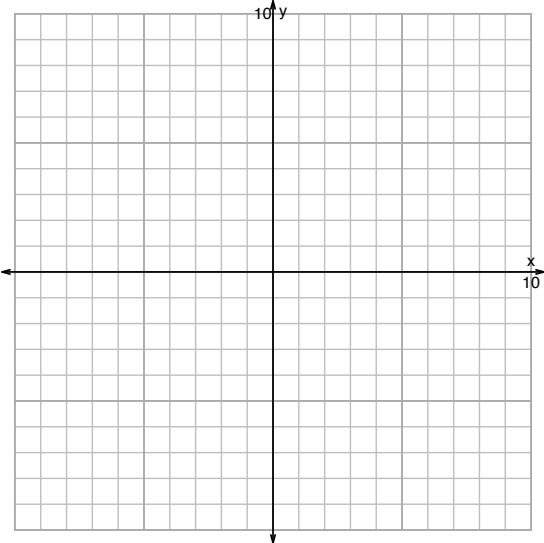
Name: \_\_\_\_\_

Date: \_\_\_\_\_

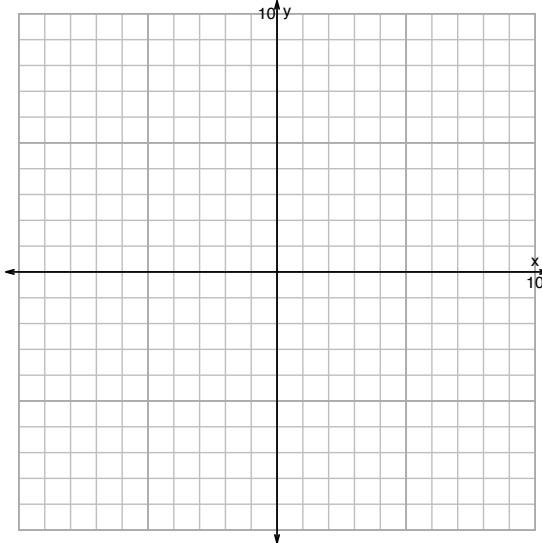
s18: EXP LOG (QUIZ v319)

1. (10 pts) Graph  $y = \log_2(x - 6) - 4$  and  $y = 2^{x-2} + 3$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 6) - 4$$



$$y = 2^{x-2} + 3$$

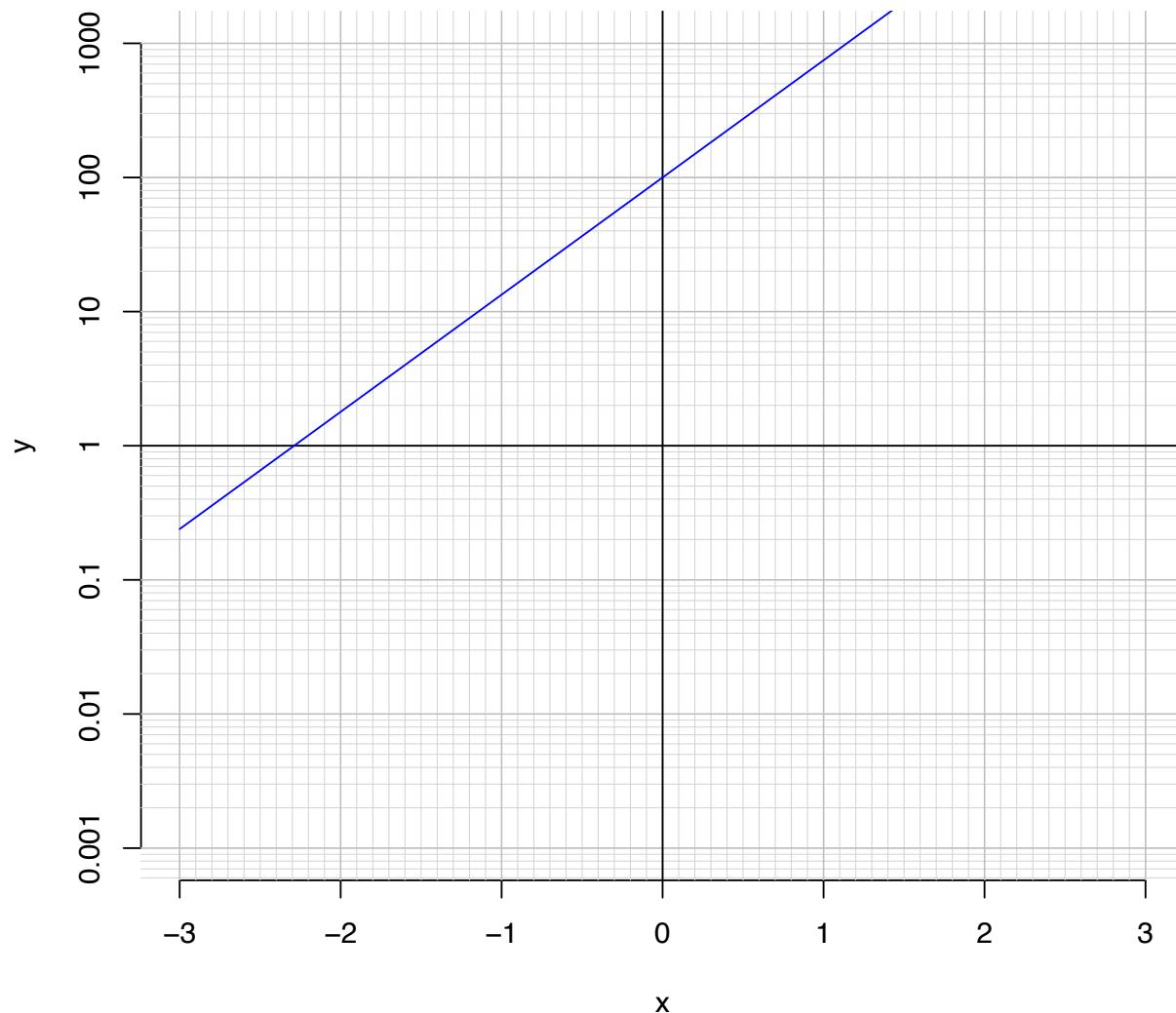


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-29 = \left(\frac{-4}{7}\right) \cdot 2^{-5t/3}$$

3. (10 pts) An exponential function  $f(x) = 100 \cdot e^{2.01x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.4)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.01} \cdot \ln\left(\frac{x}{100}\right)$$

Using the plot above, evaluate  $f^{-1}(4)$ .

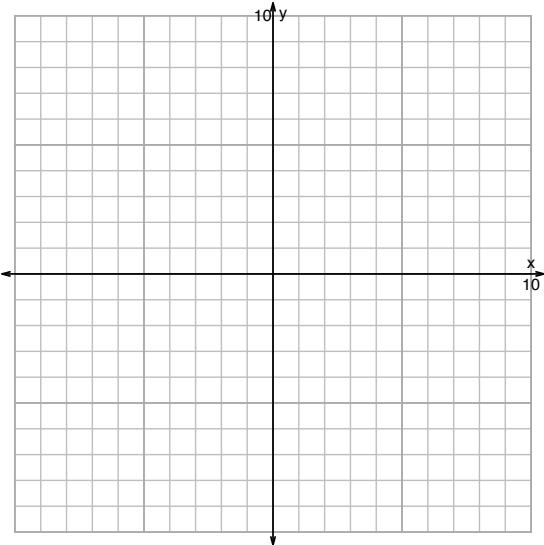
Name: \_\_\_\_\_

Date: \_\_\_\_\_

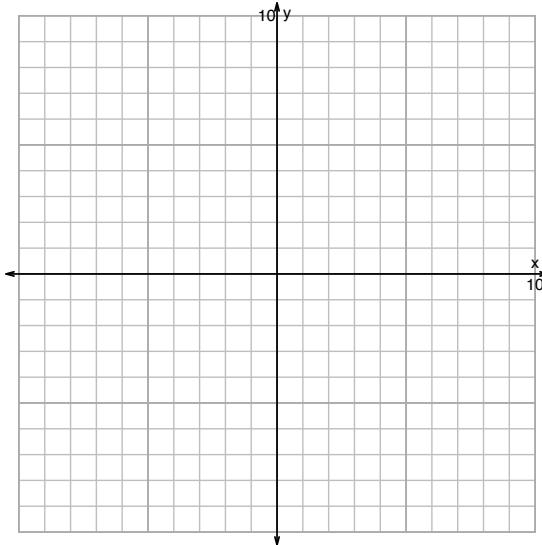
s18: EXP LOG (QUIZ v320)

1. (10 pts) Graph  $y = 2^{x-4} + 2$  and  $y = \log_2(x - 5) + 3$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-4} + 2$$



$$y = \log_2(x - 5) + 3$$

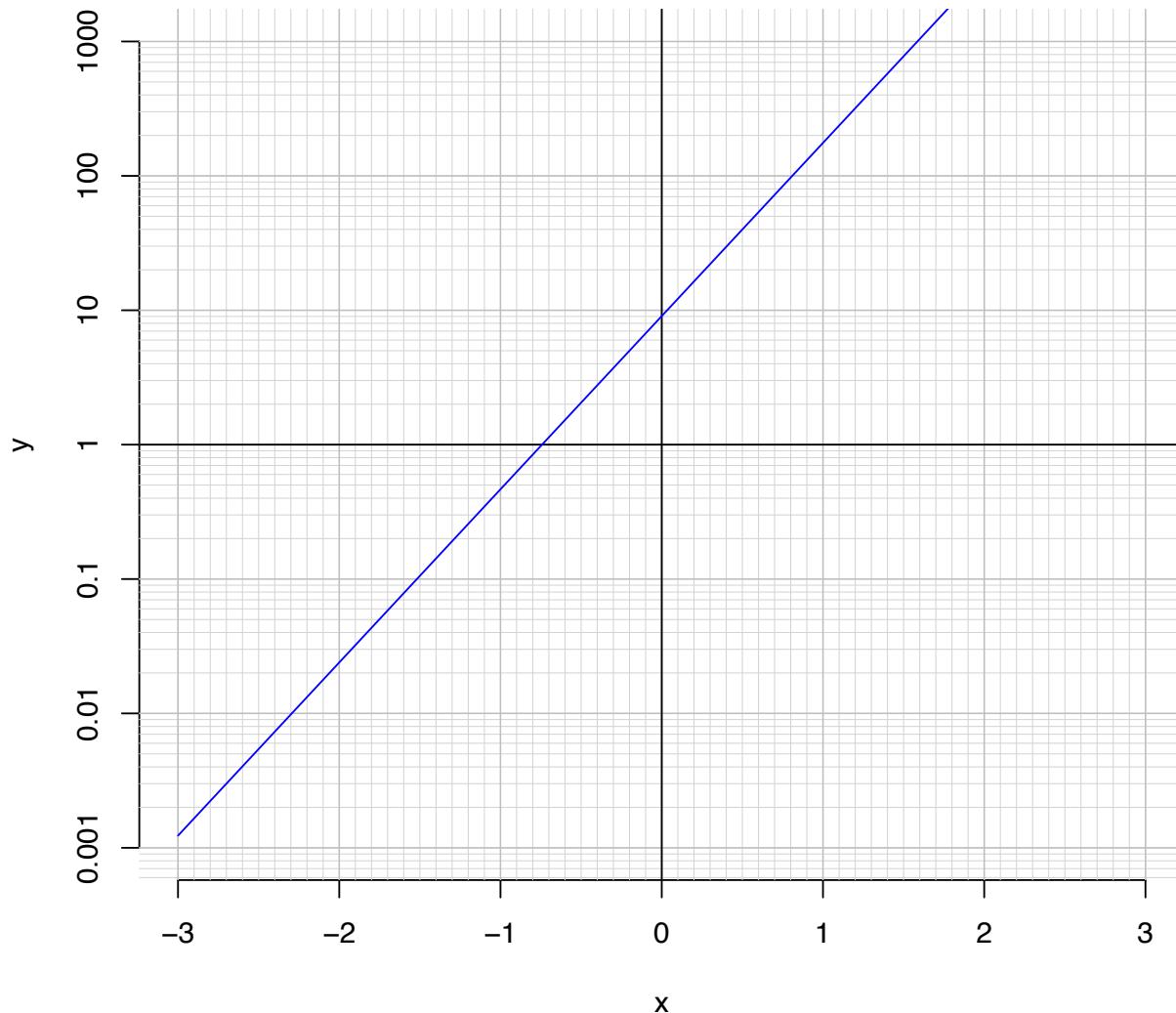


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-3}{5}\right) \cdot 10^{-7t/4}$$

3. (10 pts) An exponential function  $f(x) = 9.05 \cdot e^{2.97x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.97} \cdot \ln\left(\frac{x}{9.05}\right)$$

Using the plot above, evaluate  $f^{-1}(5)$ .

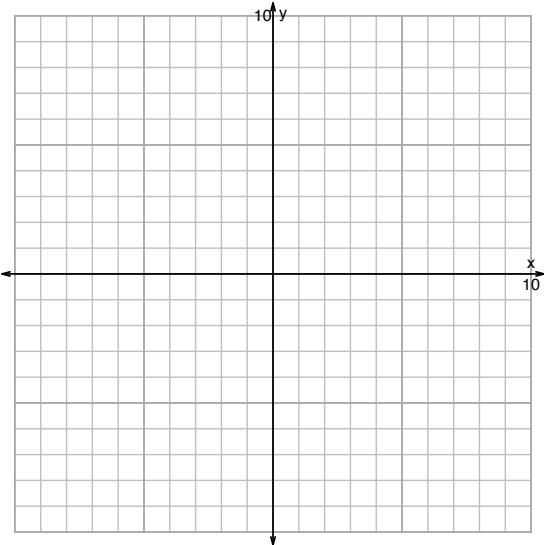
Name: \_\_\_\_\_

Date: \_\_\_\_\_

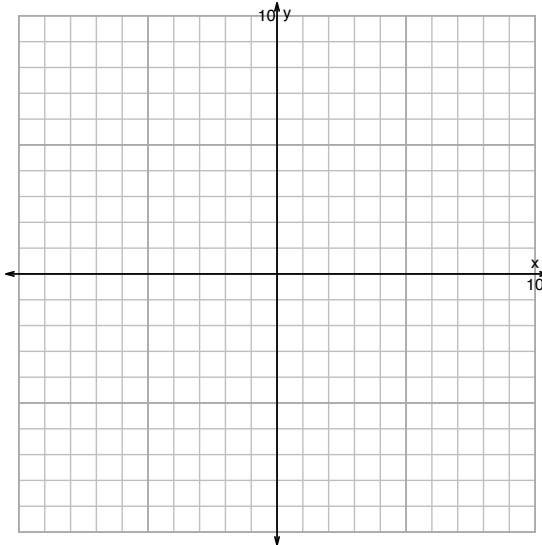
s18: EXP LOG (QUIZ v321)

1. (10 pts) Graph  $y = 2^{x+6} - 2$  and  $y = \log_2(x - 1) + 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+6} - 2$$



$$y = \log_2(x - 1) + 2$$

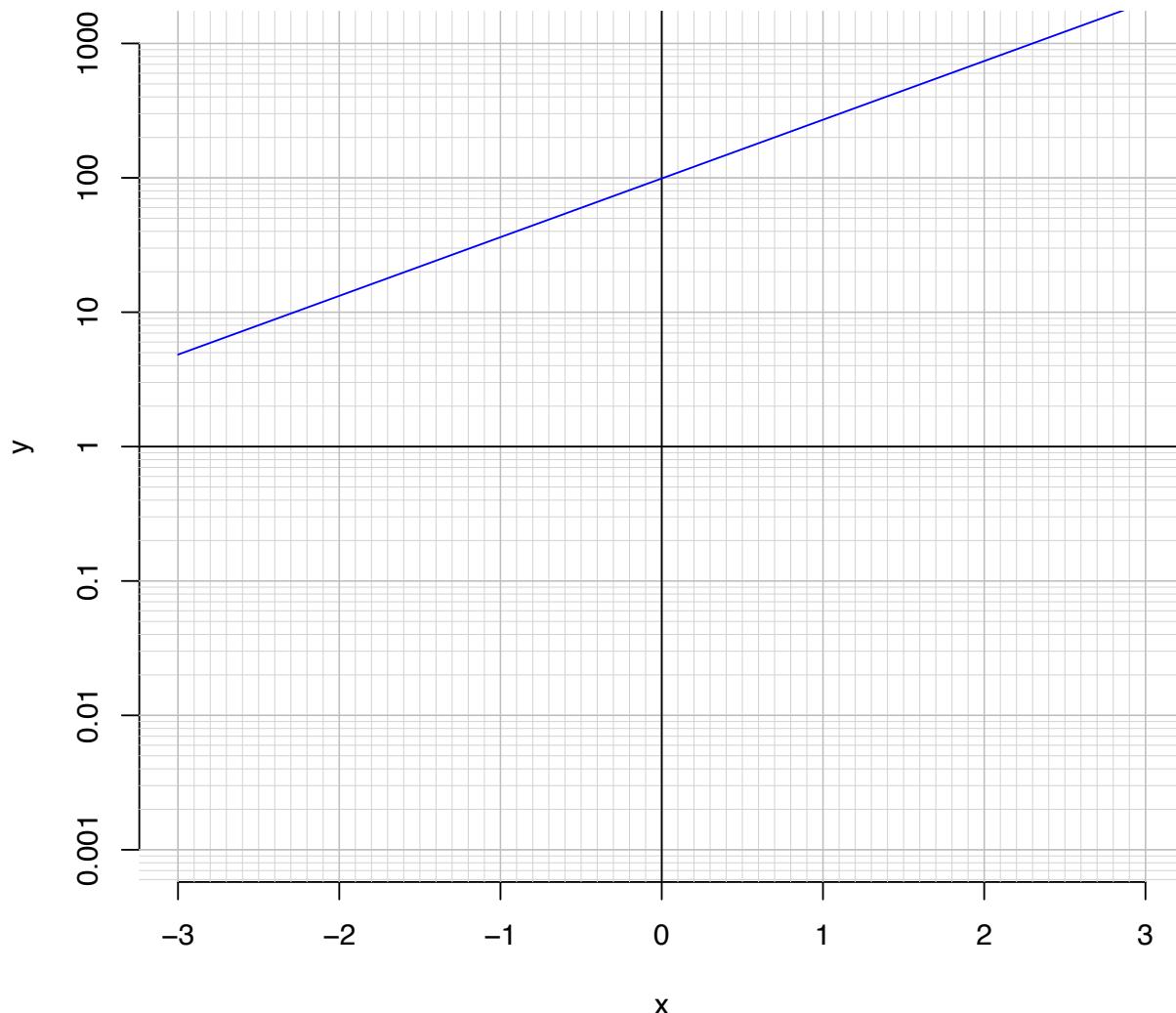


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$11 = \left(\frac{5}{3}\right) \cdot 2^{-7t/4}$$

3. (10 pts) An exponential function  $f(x) = 98.9 \cdot e^{1.01x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(0.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.01} \cdot \ln\left(\frac{x}{98.9}\right)$$

Using the plot above, evaluate  $f^{-1}(40)$ .

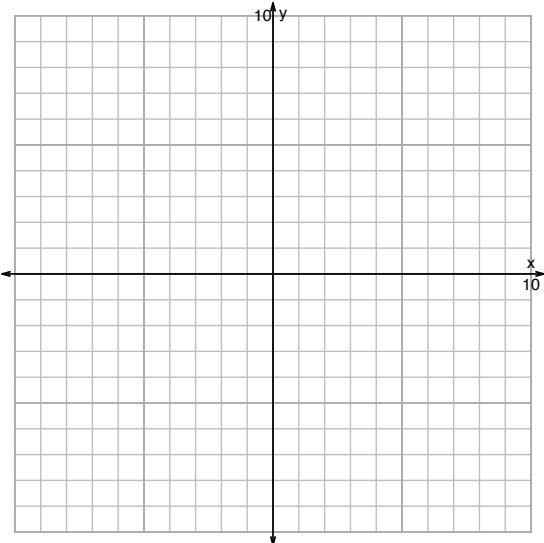
Name: \_\_\_\_\_

Date: \_\_\_\_\_

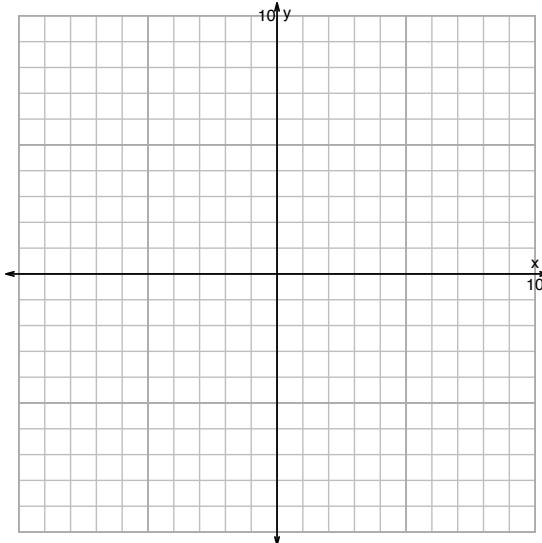
s18: EXP LOG (QUIZ v322)

1. (10 pts) Graph  $y = 2^{x+5} + 4$  and  $y = \log_2(x + 2) - 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+5} + 4$$



$$y = \log_2(x + 2) - 1$$

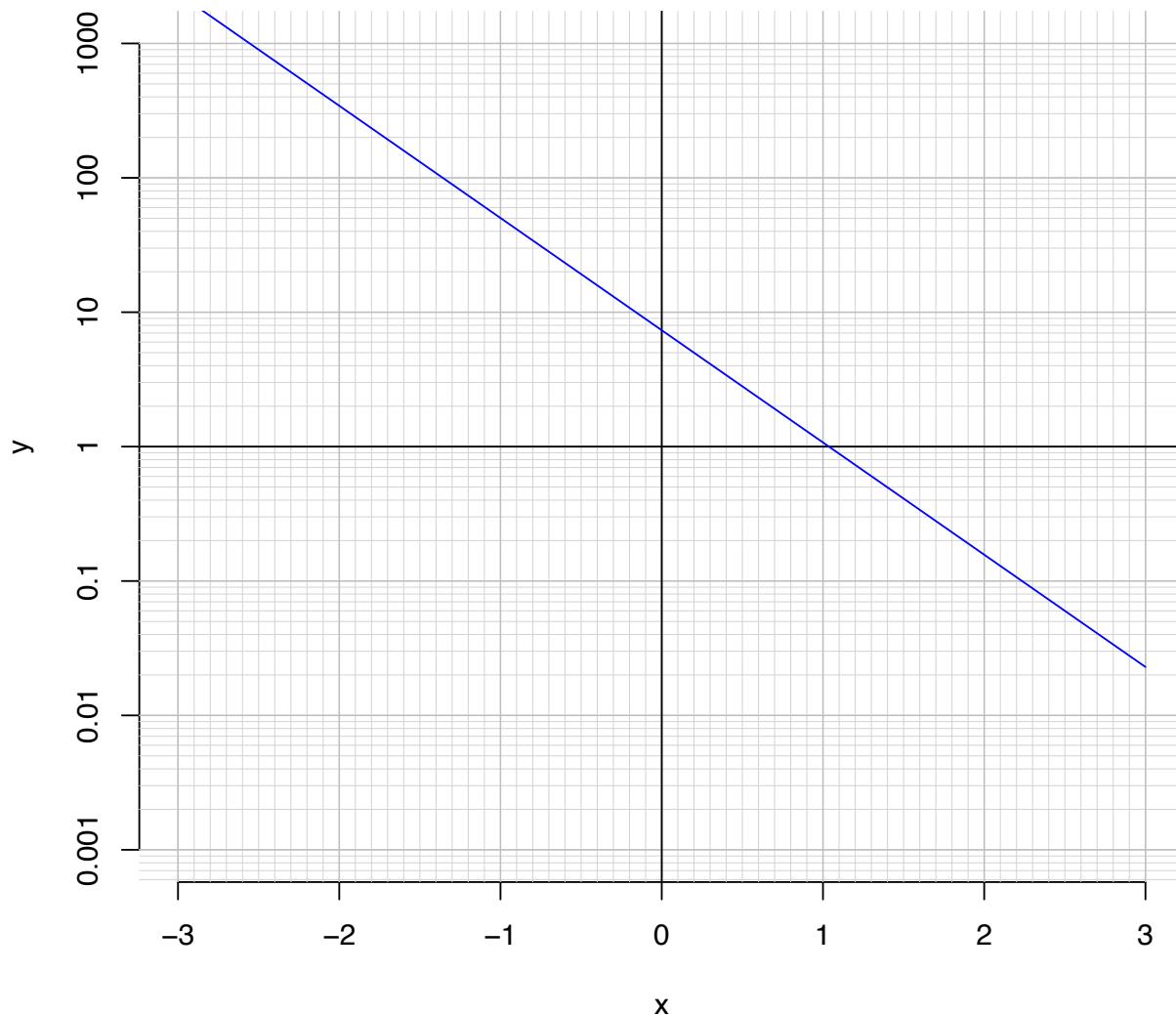


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-5}{3}\right) \cdot 2^{-7t/4}$$

3. (10 pts) An exponential function  $f(x) = 7.35 \cdot e^{-1.92x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(0.2)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.92} \cdot \ln\left(\frac{x}{7.35}\right)$$

Using the plot above, evaluate  $f^{-1}(0.06)$ .

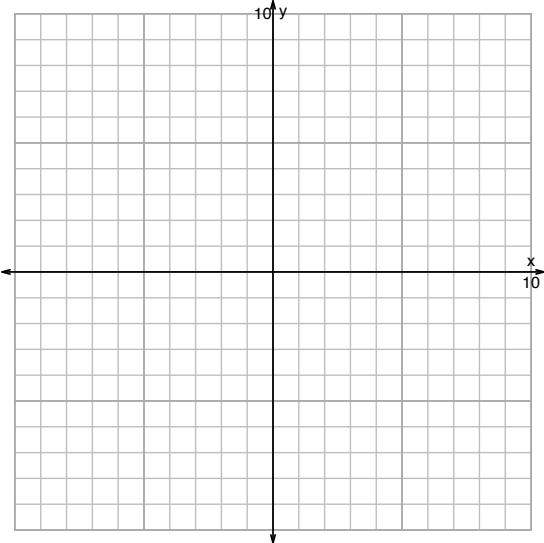
Name: \_\_\_\_\_

Date: \_\_\_\_\_

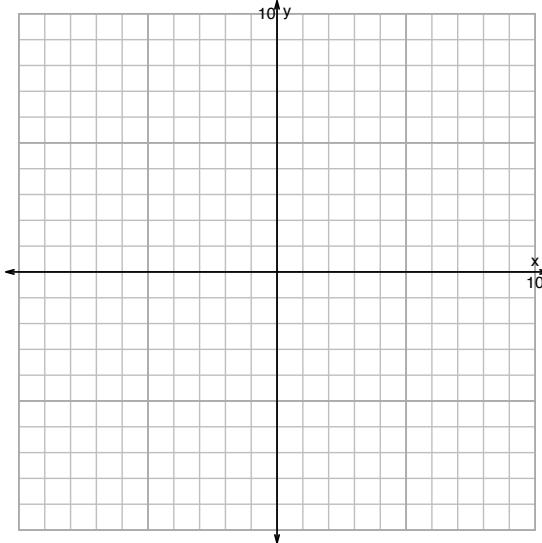
s18: EXP LOG (QUIZ v323)

1. (10 pts) Graph  $y = 2^{x+4} - 2$  and  $y = \log_2(x - 5) + 3$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+4} - 2$$



$$y = \log_2(x - 5) + 3$$

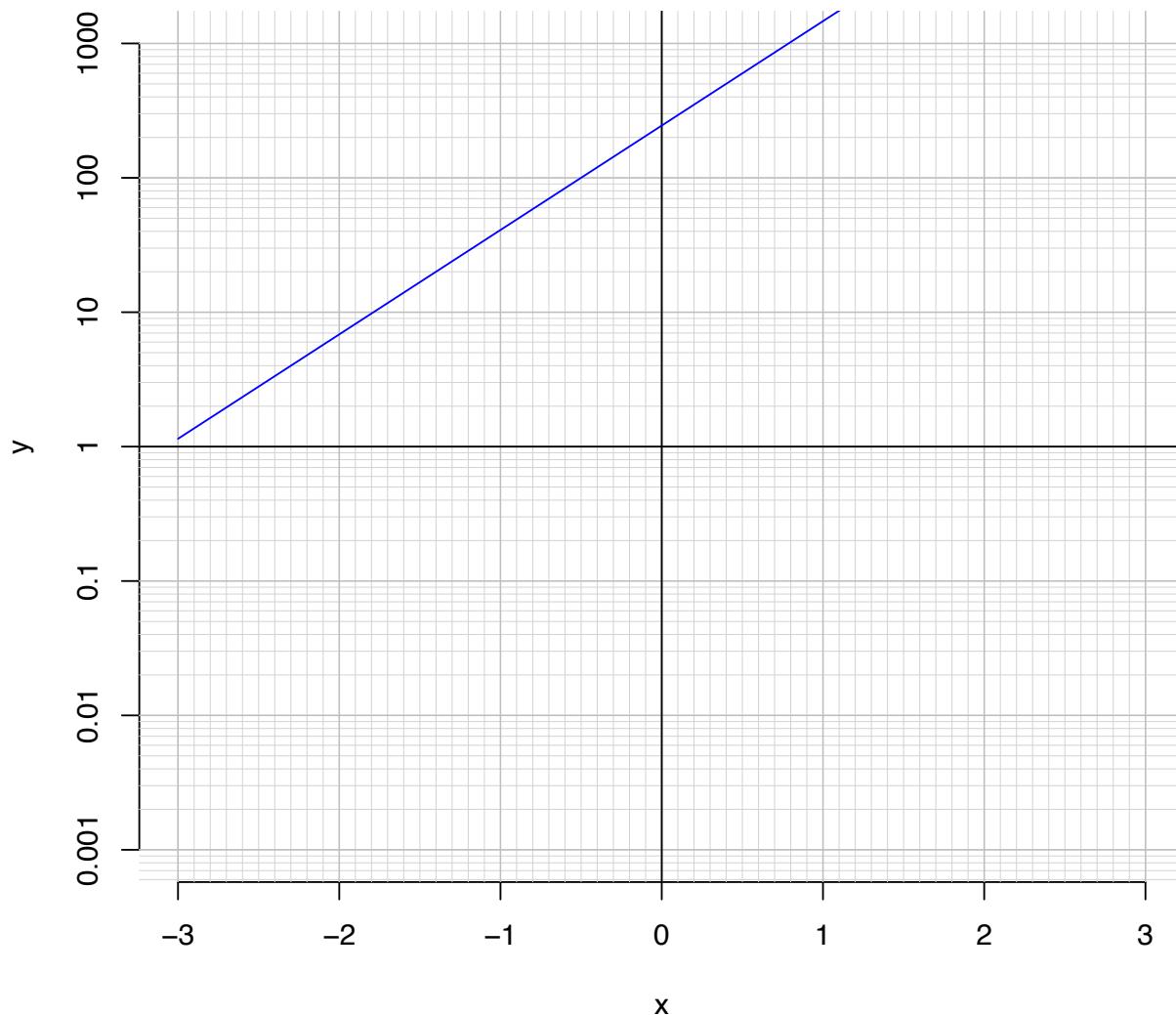


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$13 = \left(\frac{5}{4}\right) \cdot 10^{7t/3}$$

3. (10 pts) An exponential function  $f(x) = 245 \cdot e^{1.79x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-0.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.79} \cdot \ln\left(\frac{x}{245}\right)$$

Using the plot above, evaluate  $f^{-1}(4)$ .

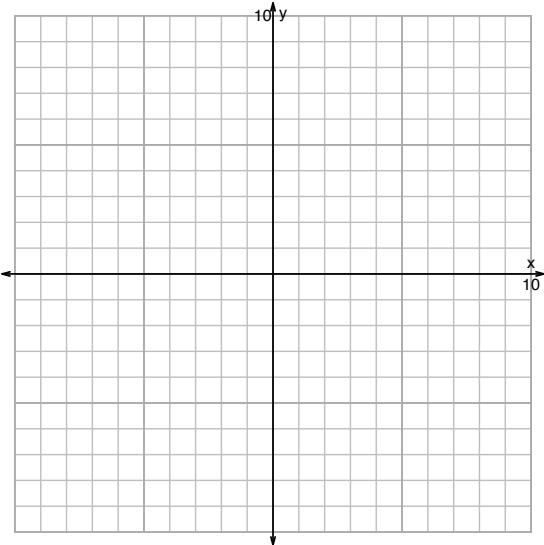
Name: \_\_\_\_\_

Date: \_\_\_\_\_

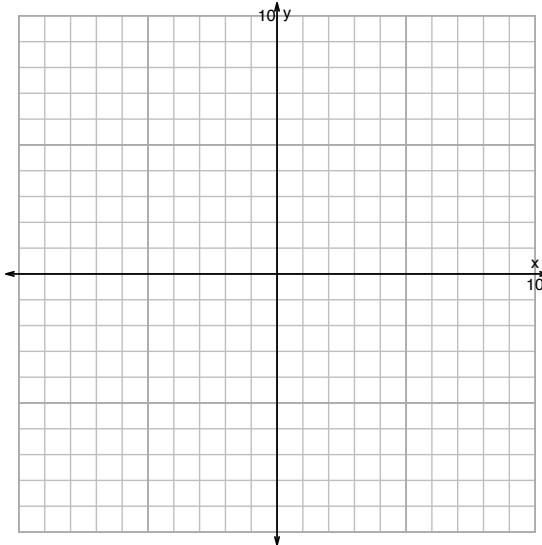
s18: EXP LOG (QUIZ v324)

1. (10 pts) Graph  $y = 2^{x-2} - 5$  and  $y = \log_2(x + 5) + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-2} - 5$$



$$y = \log_2(x + 5) + 4$$

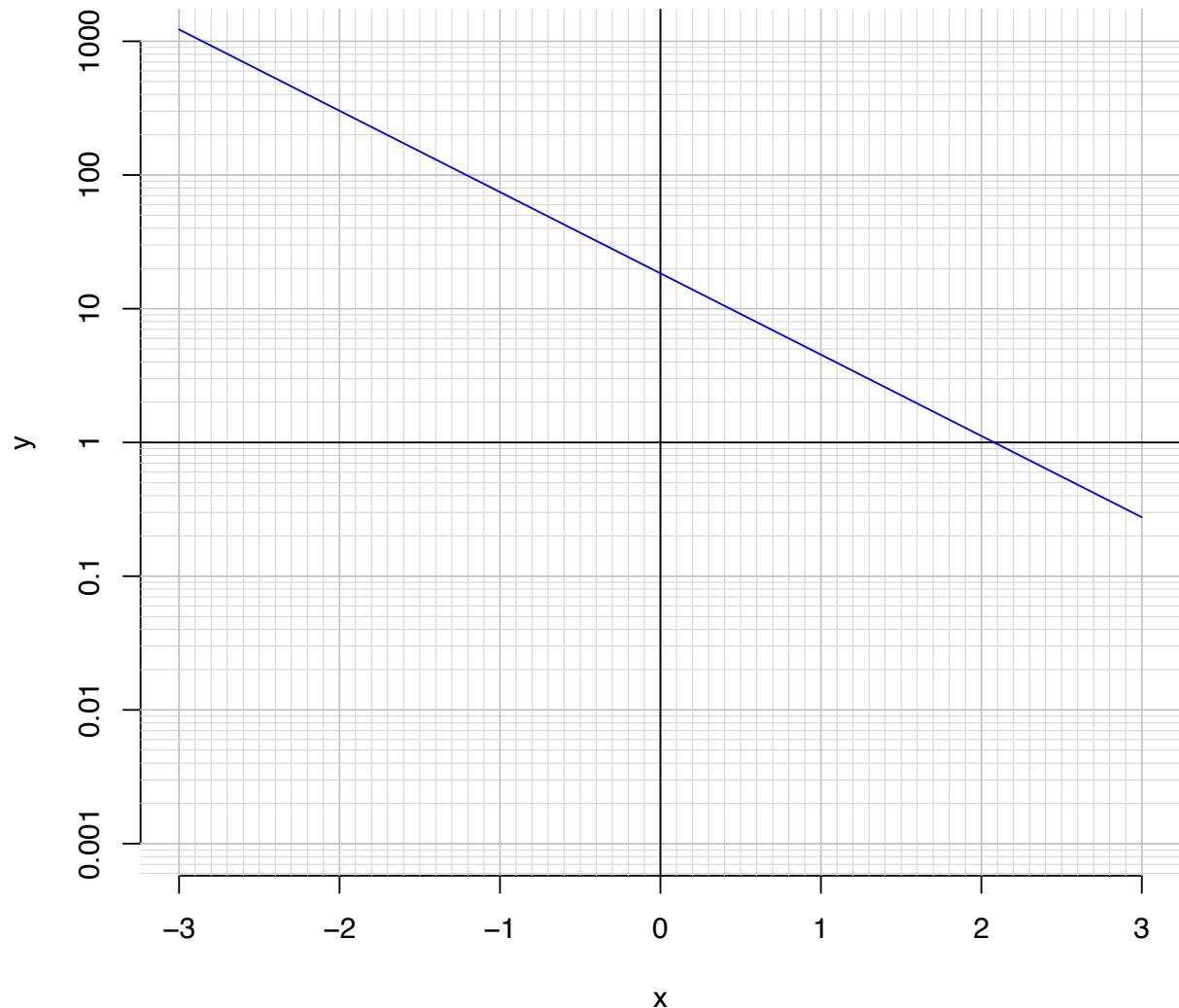


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-4}{3}\right) \cdot 2^{5t/7}$$

3. (10 pts) An exponential function  $f(x) = 18.4 \cdot e^{-1.4x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.4} \cdot \ln\left(\frac{x}{18.4}\right)$$

Using the plot above, evaluate  $f^{-1}(6)$ .

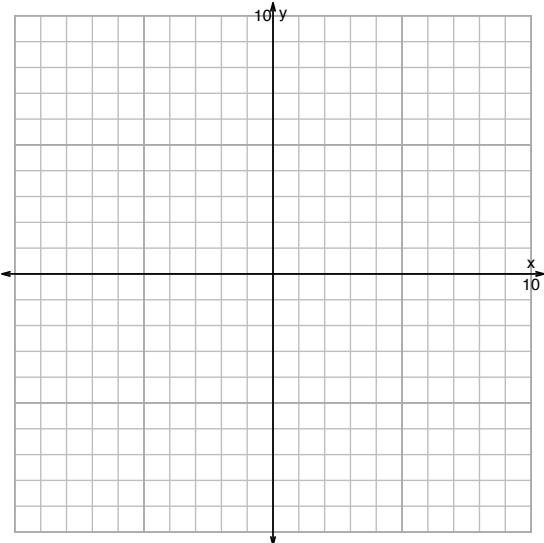
Name: \_\_\_\_\_

Date: \_\_\_\_\_

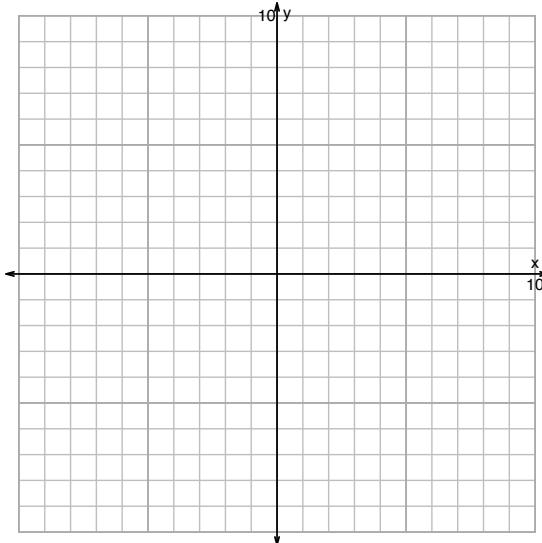
s18: EXP LOG (QUIZ v325)

1. (10 pts) Graph  $y = \log_2(x + 2) + 1$  and  $y = 2^{x+5} - 6$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 2) + 1$$



$$y = 2^{x+5} - 6$$

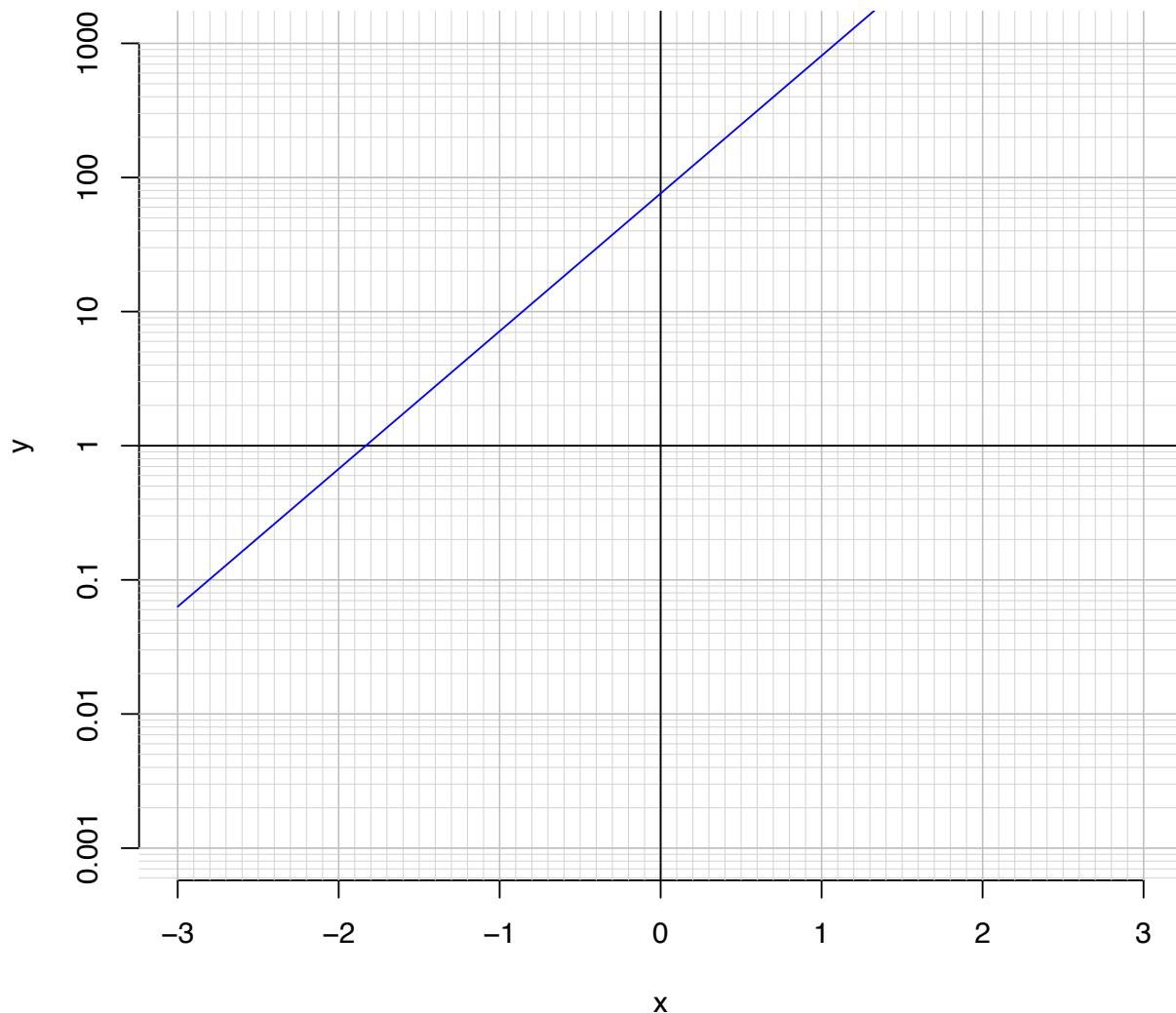


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$19 = \left(\frac{4}{5}\right) \cdot 2^{7t/3}$$

3. (10 pts) An exponential function  $f(x) = 76 \cdot e^{2.36x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.9)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.36} \cdot \ln\left(\frac{x}{76}\right)$$

Using the plot above, evaluate  $f^{-1}(60)$ .

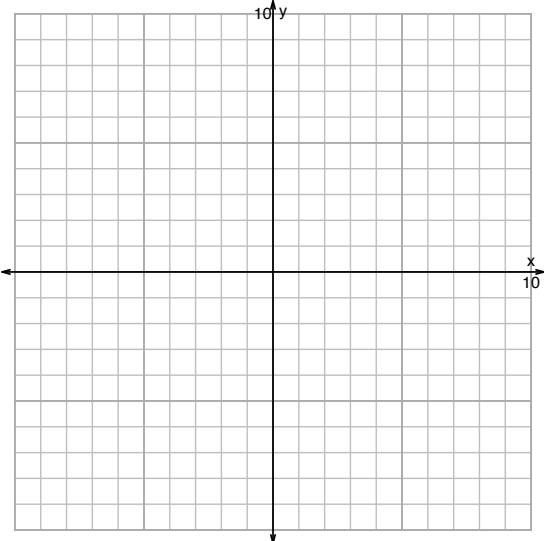
Name: \_\_\_\_\_

Date: \_\_\_\_\_

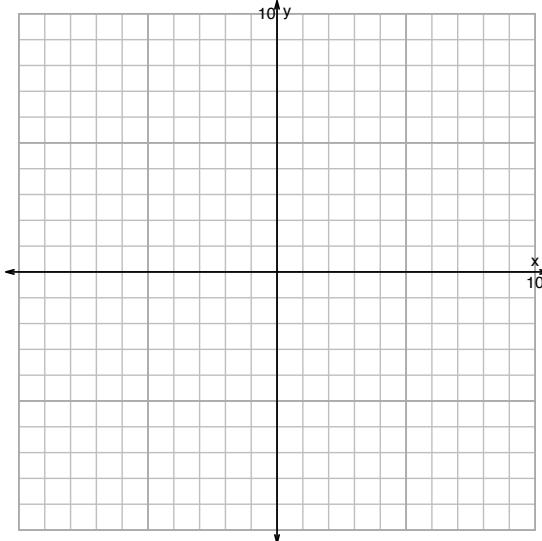
s18: EXP LOG (QUIZ v326)

1. (10 pts) Graph  $y = \log_2(x + 6) - 4$  and  $y = 2^{x-5} + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 6) - 4$$



$$y = 2^{x-5} + 4$$

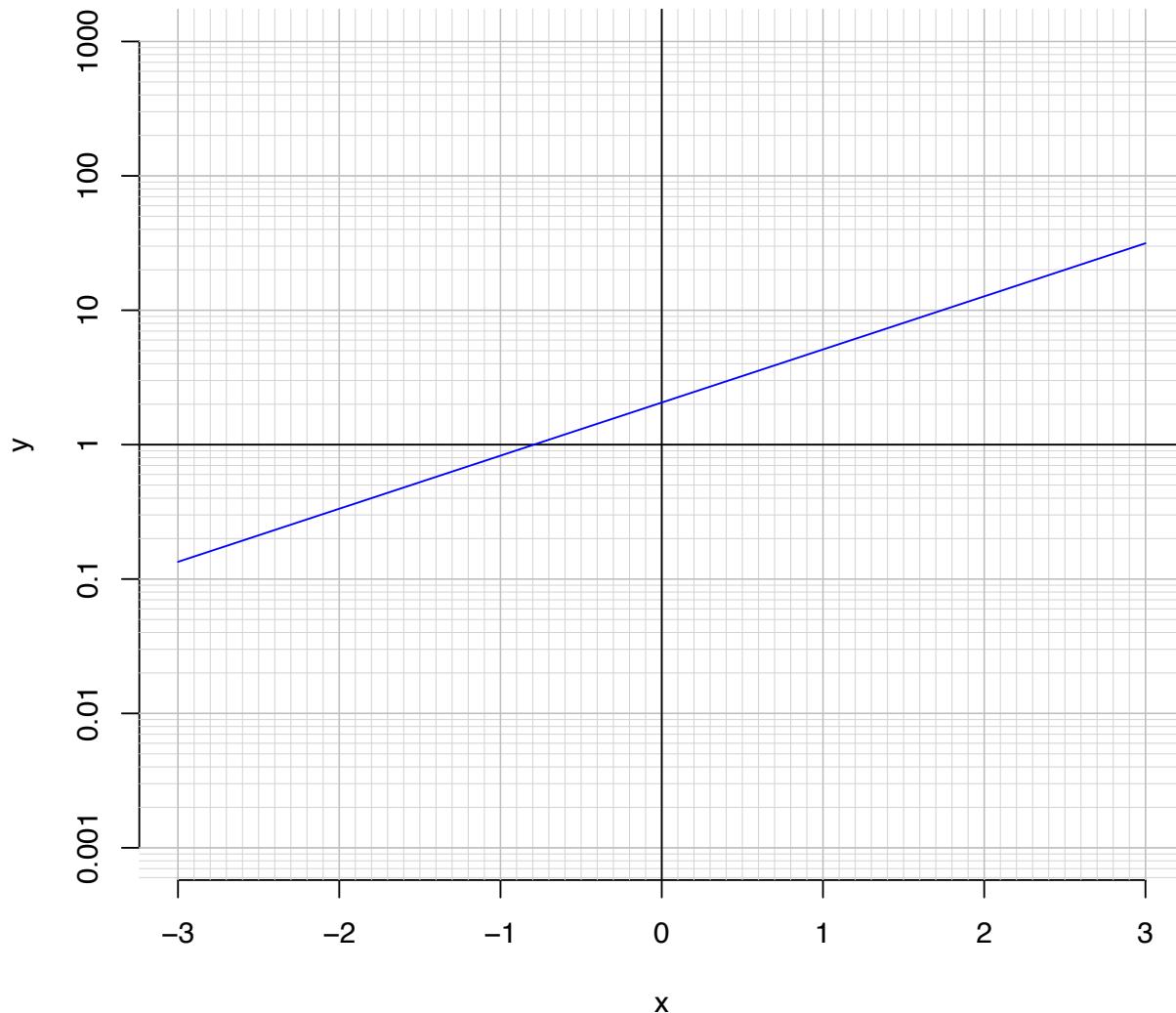


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$19 = \left(\frac{3}{5}\right) \cdot 2^{4t/7}$$

3. (10 pts) An exponential function  $f(x) = 2.06 \cdot e^{0.91x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.5)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{0.91} \cdot \ln\left(\frac{x}{2.06}\right)$$

Using the plot above, evaluate  $f^{-1}(0.4)$ .

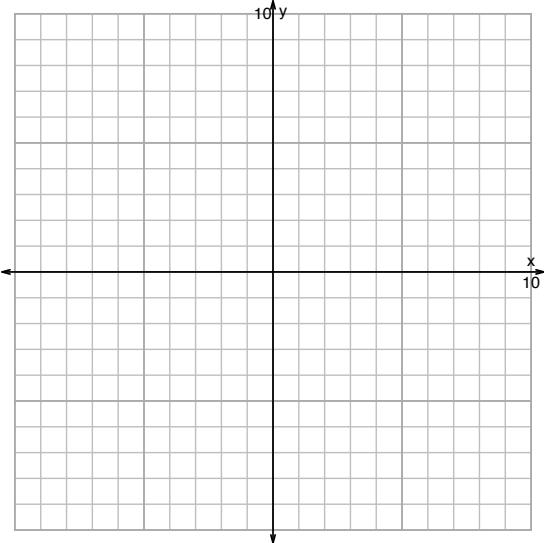
Name: \_\_\_\_\_

Date: \_\_\_\_\_

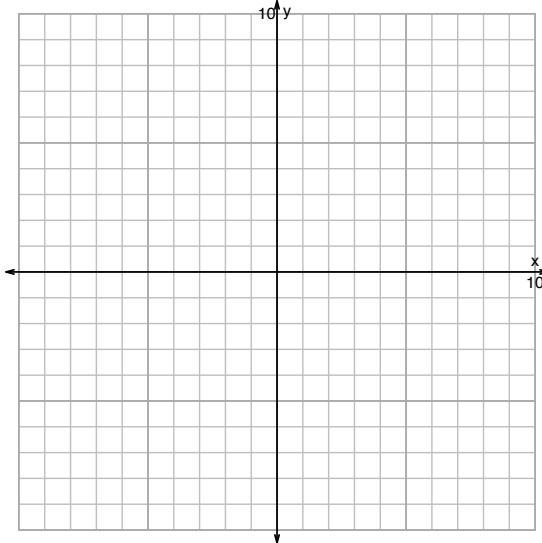
s18: EXP LOG (QUIZ v327)

1. (10 pts) Graph  $y = \log_2(x + 3) - 5$  and  $y = 2^{x+1} + 6$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 3) - 5$$



$$y = 2^{x+1} + 6$$

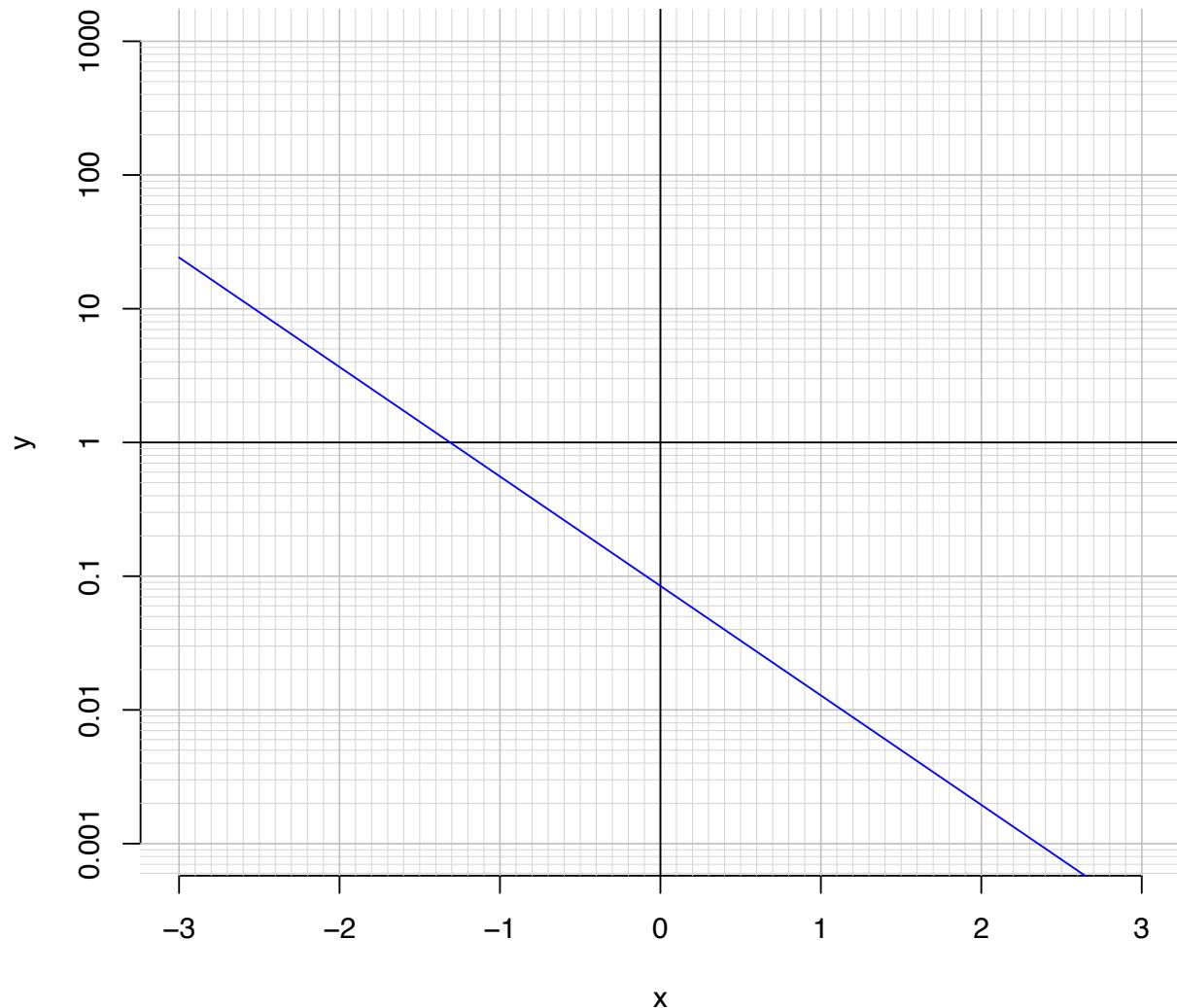


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-3}{7}\right) \cdot 2^{-4t/5}$$

3. (10 pts) An exponential function  $f(x) = 0.0845 \cdot e^{-1.89x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.5)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.89} \cdot \ln\left(\frac{x}{0.0845}\right)$$

Using the plot above, evaluate  $f^{-1}(0.07)$ .

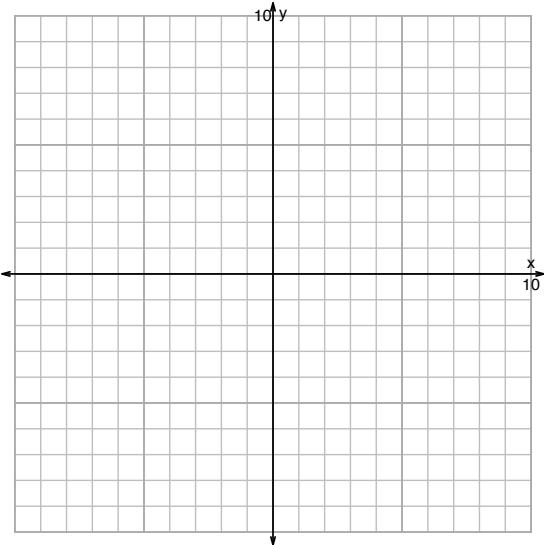
Name: \_\_\_\_\_

Date: \_\_\_\_\_

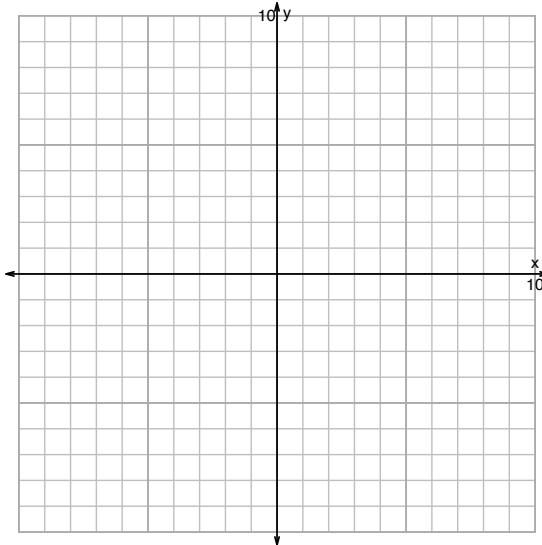
s18: EXP LOG (QUIZ v328)

1. (10 pts) Graph  $y = 2^{x-6} + 5$  and  $y = \log_2(x - 2) + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-6} + 5$$



$$y = \log_2(x - 2) + 1$$

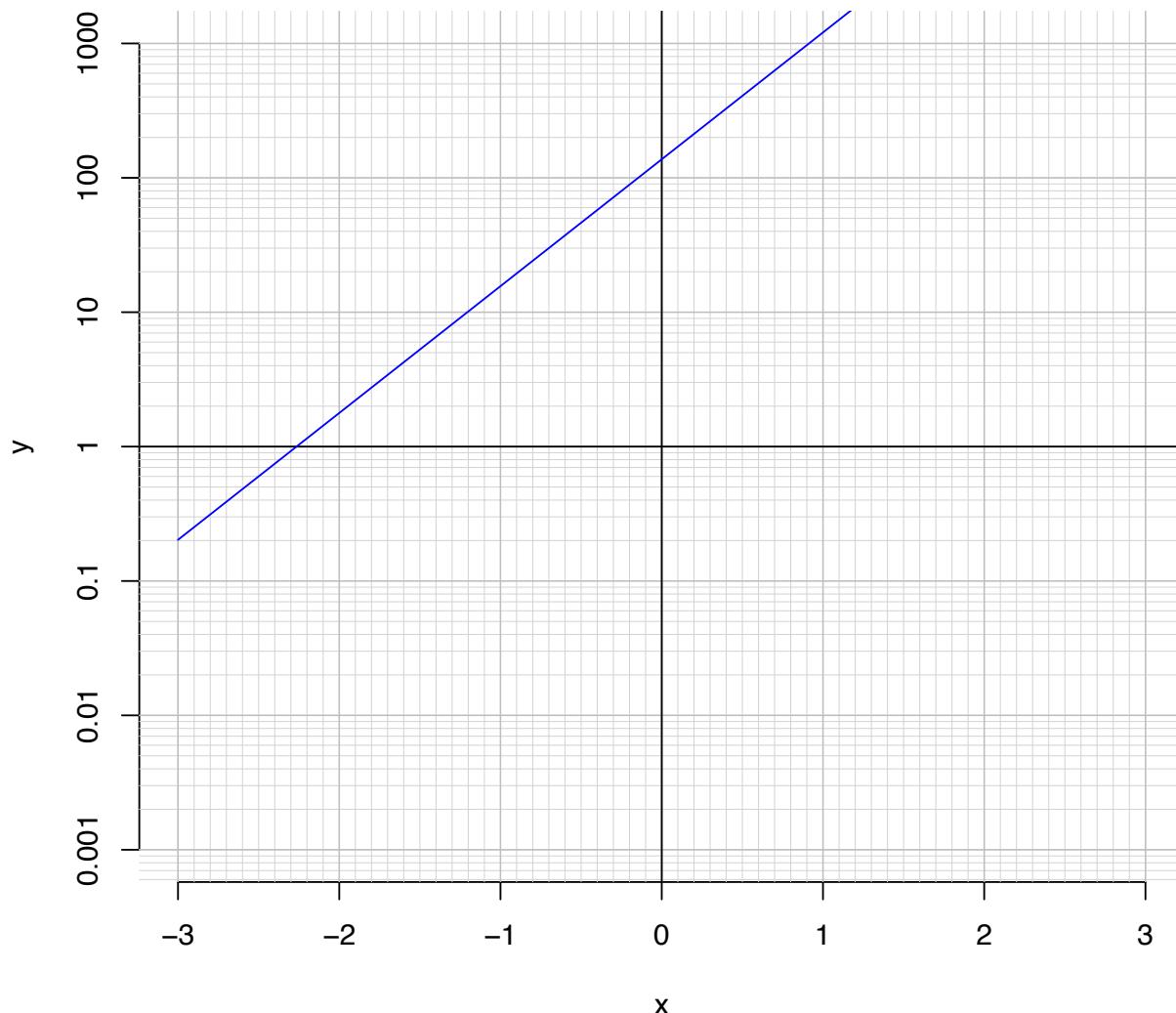


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-11 = \left(\frac{-5}{7}\right) \cdot 2^{-3t/4}$$

3. (10 pts) An exponential function  $f(x) = 137 \cdot e^{2.17x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.5)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{2.17} \cdot \ln\left(\frac{x}{137}\right)$$

Using the plot above, evaluate  $f^{-1}(30)$ .

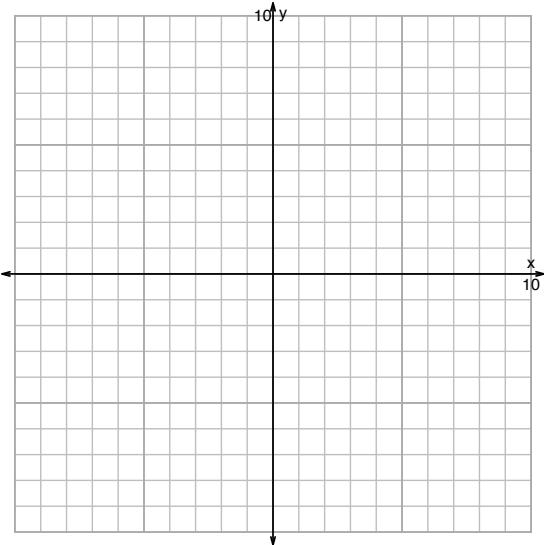
Name: \_\_\_\_\_

Date: \_\_\_\_\_

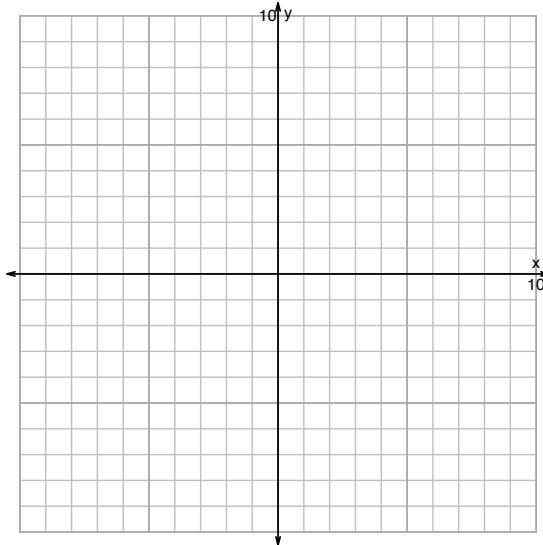
s18: EXP LOG (QUIZ v329)

1. (10 pts) Graph  $y = \log_2(x - 5) + 4$  and  $y = 2^{x+2} + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 5) + 4$$



$$y = 2^{x+2} + 1$$

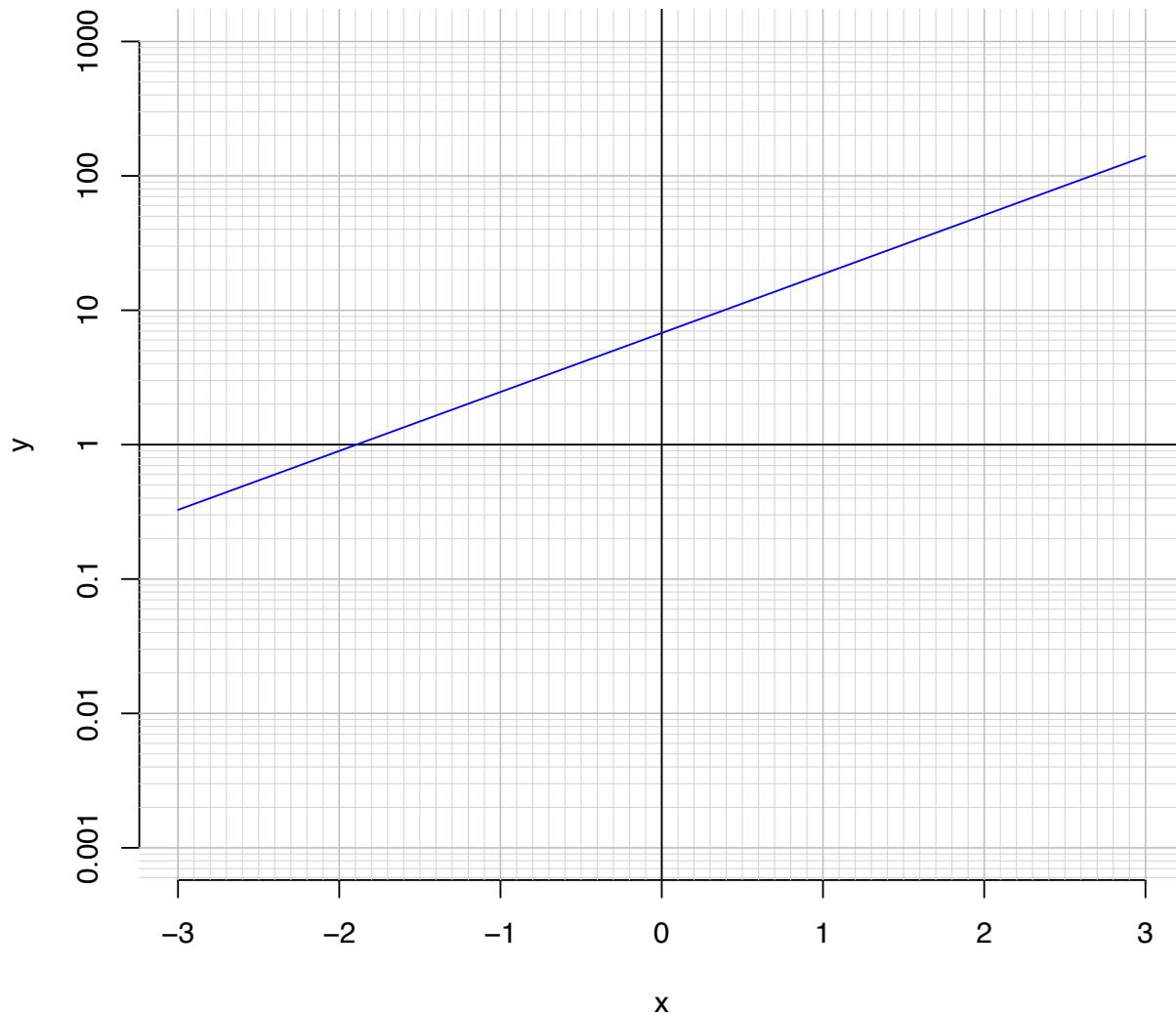


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-5}{4}\right) \cdot 10^{-7t/3}$$

3. (10 pts) An exponential function  $f(x) = 6.77 \cdot e^{1.01x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.8)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.01} \cdot \ln\left(\frac{x}{6.77}\right)$$

Using the plot above, evaluate  $f^{-1}(5)$ .

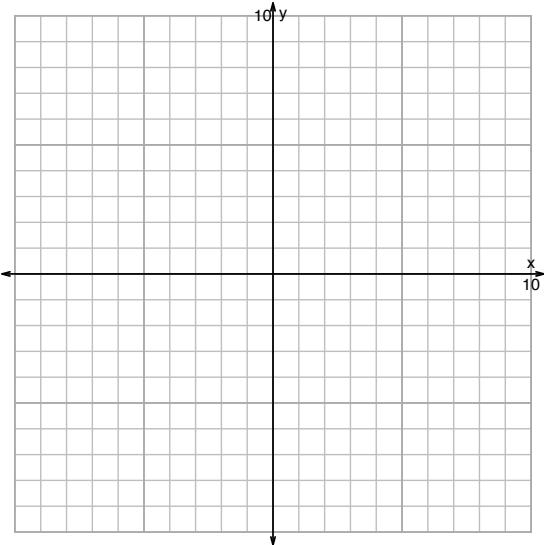
Name: \_\_\_\_\_

Date: \_\_\_\_\_

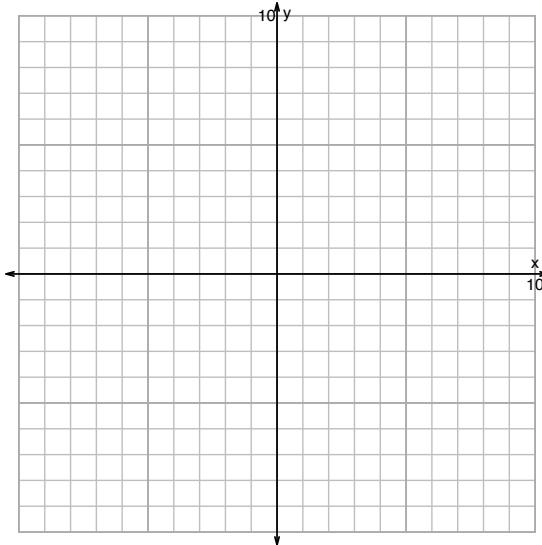
s18: EXP LOG (QUIZ v330)

1. (10 pts) Graph  $y = 2^{x-4} - 6$  and  $y = \log_2(x - 5) + 6$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-4} - 6$$



$$y = \log_2(x - 5) + 6$$

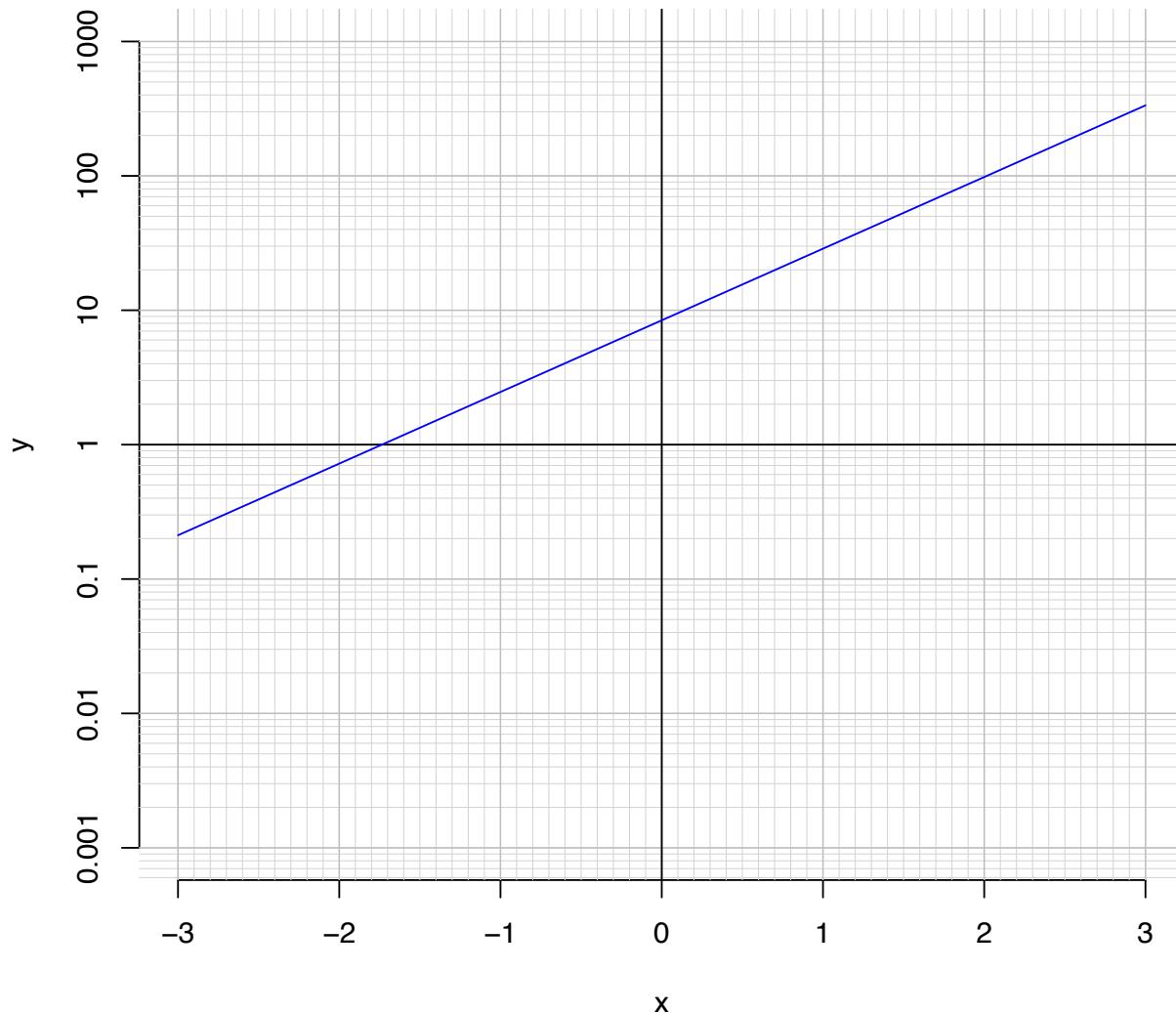


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-23 = \left(\frac{-5}{3}\right) \cdot 10^{4t/7}$$

3. (10 pts) An exponential function  $f(x) = 8.42 \cdot e^{1.23x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.23} \cdot \ln\left(\frac{x}{8.42}\right)$$

Using the plot above, evaluate  $f^{-1}(0.5)$ .

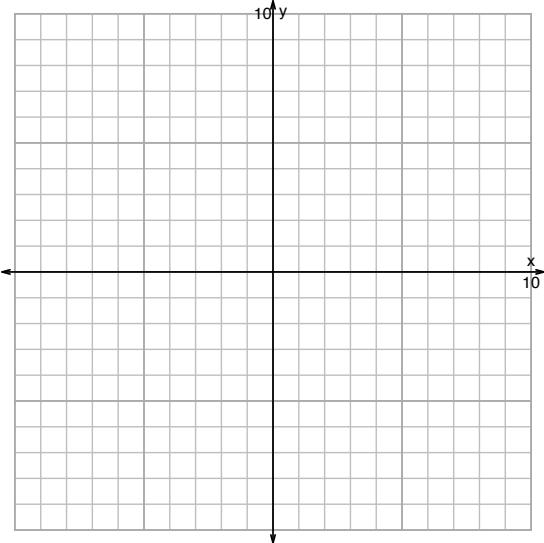
Name: \_\_\_\_\_

Date: \_\_\_\_\_

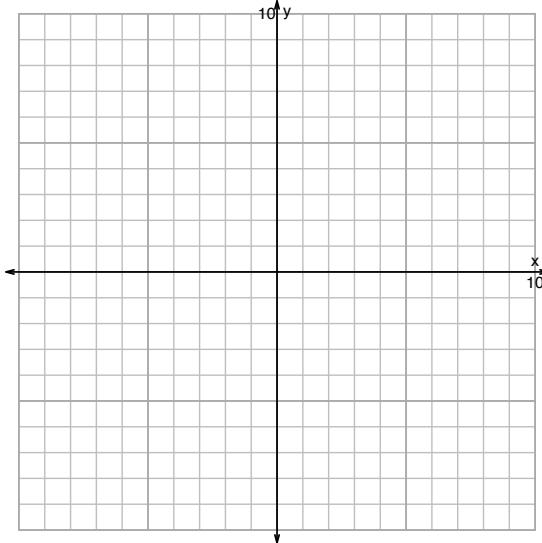
s18: EXP LOG (QUIZ v331)

1. (10 pts) Graph  $y = \log_2(x - 2) - 6$  and  $y = 2^{x+2} + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 2) - 6$$



$$y = 2^{x+2} + 1$$

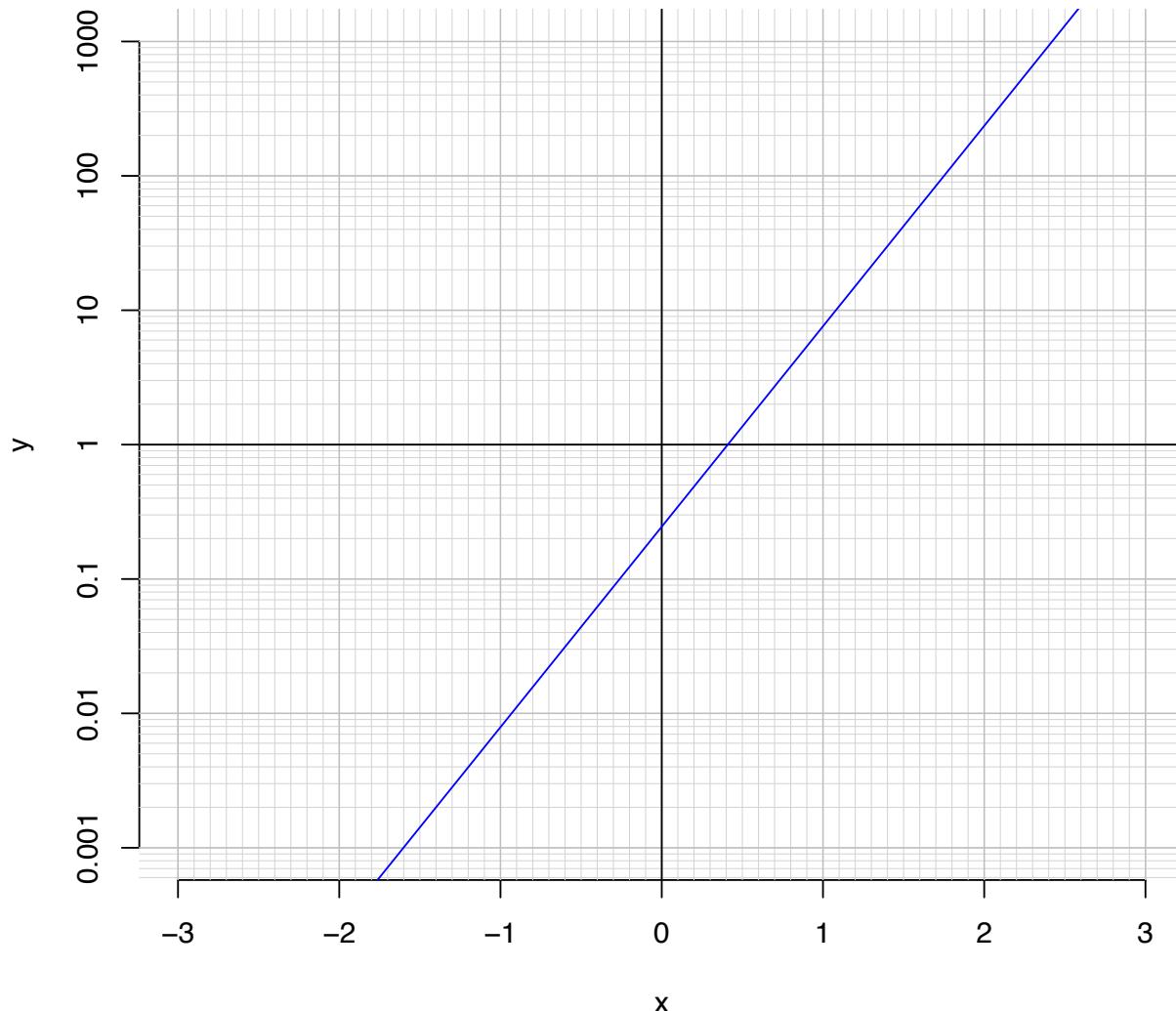


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$17 = \left(\frac{5}{3}\right) \cdot 10^{-4t/7}$$

3. (10 pts) An exponential function  $f(x) = 0.245 \cdot e^{3.43x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-1.4)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{3.43} \cdot \ln\left(\frac{x}{0.245}\right)$$

Using the plot above, evaluate  $f^{-1}(30)$ .

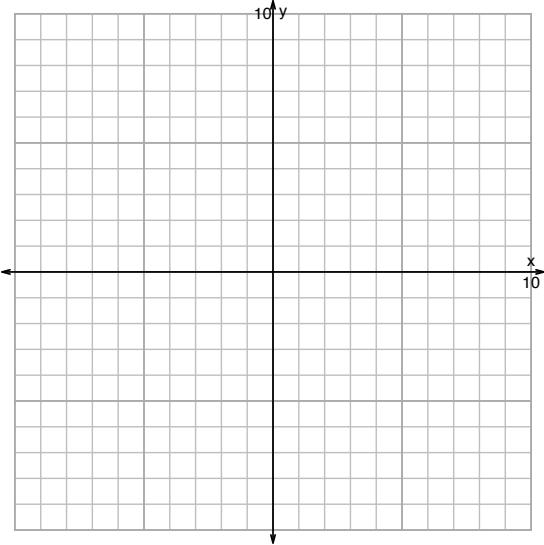
Name: \_\_\_\_\_

Date: \_\_\_\_\_

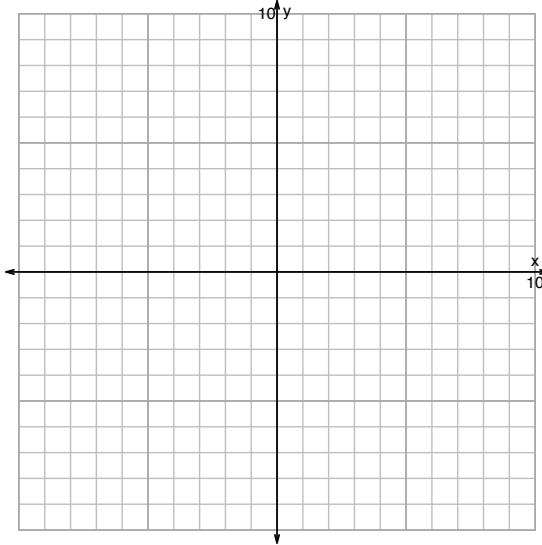
s18: EXP LOG (QUIZ v332)

1. (10 pts) Graph  $y = \log_2(x + 4) - 6$  and  $y = 2^{x-3} + 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 4) - 6$$



$$y = 2^{x-3} + 5$$

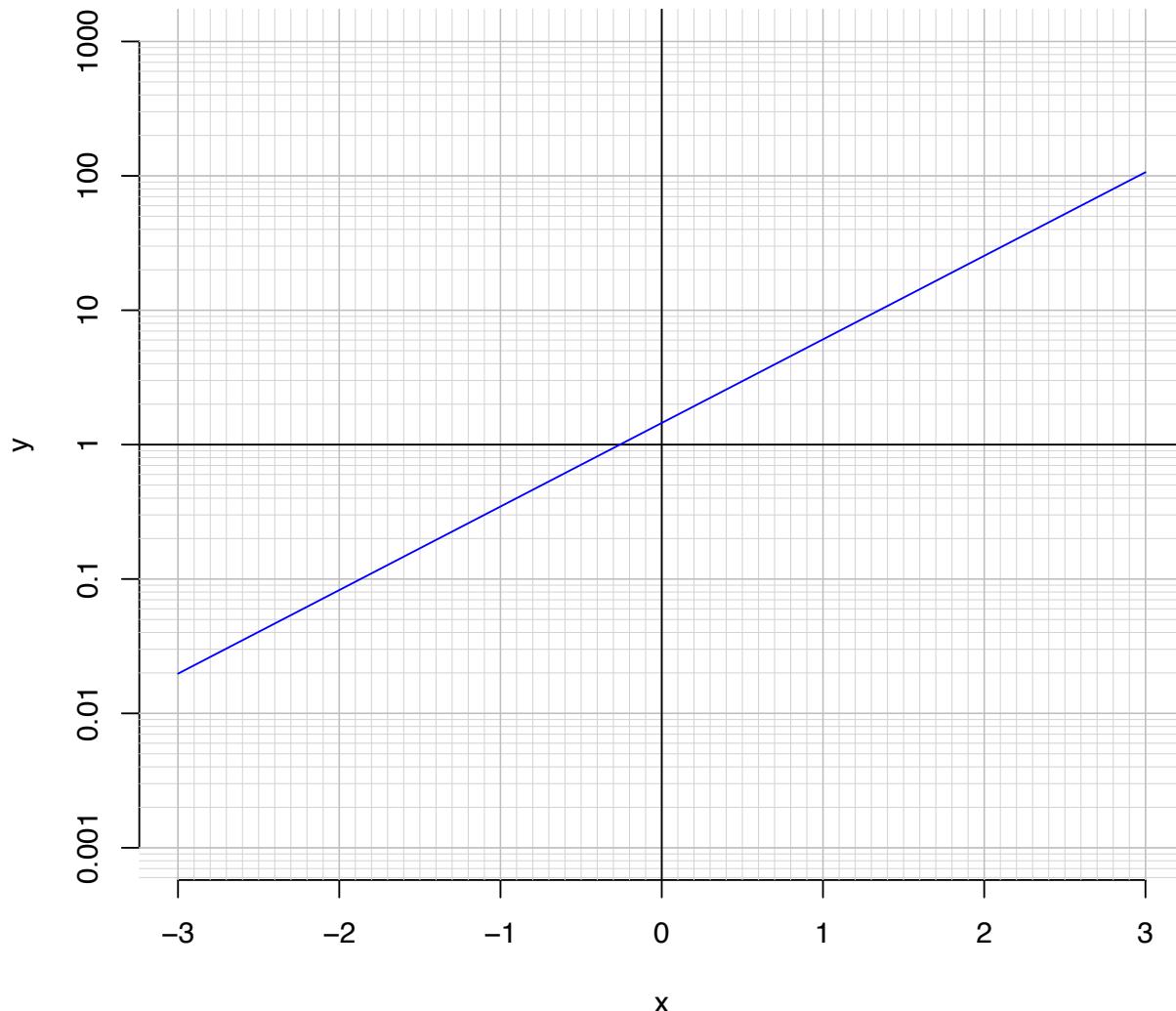


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-13 = \left(\frac{-3}{4}\right) \cdot 2^{-7t/5}$$

3. (10 pts) An exponential function  $f(x) = 1.45 \cdot e^{1.43x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.43} \cdot \ln\left(\frac{x}{1.45}\right)$$

Using the plot above, evaluate  $f^{-1}(0.3)$ .

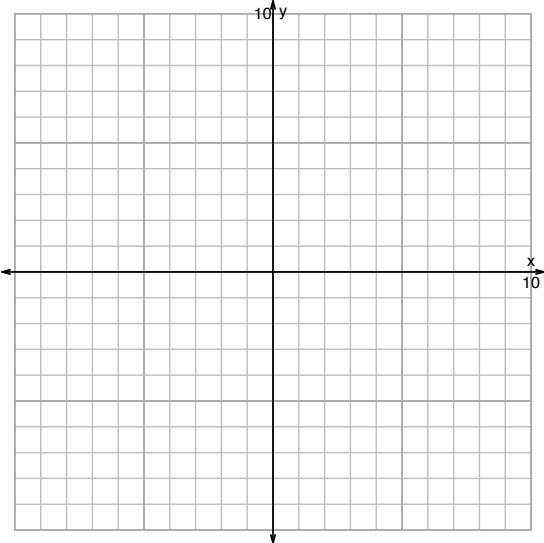
Name: \_\_\_\_\_

Date: \_\_\_\_\_

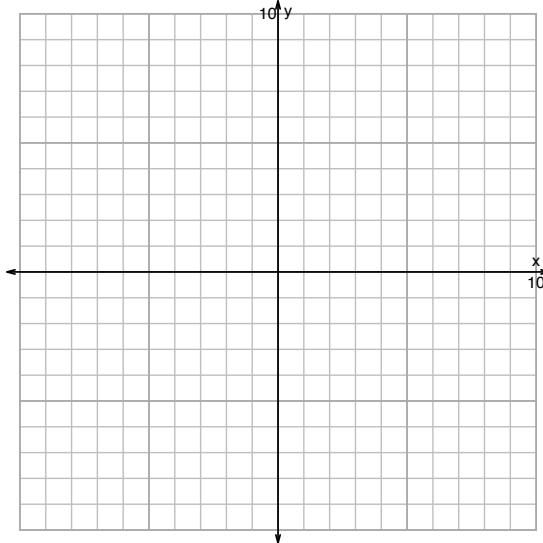
s18: EXP LOG (QUIZ v333)

1. (10 pts) Graph  $y = \log_2(x - 4) - 2$  and  $y = 2^{x+6} + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 4) - 2$$



$$y = 2^{x+6} + 1$$

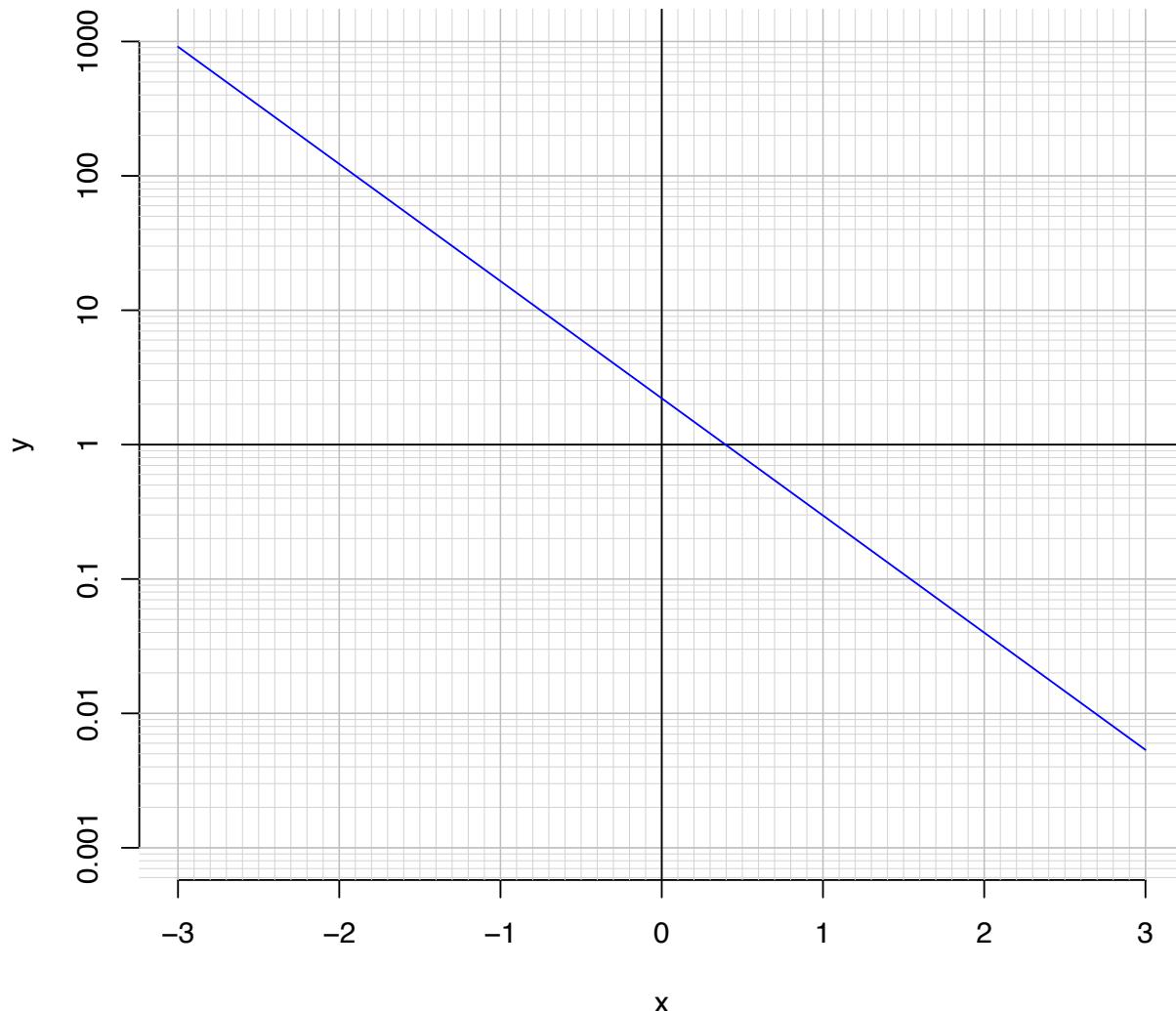


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-29 = \left(\frac{-7}{5}\right) \cdot 2^{3t/4}$$

3. (10 pts) An exponential function  $f(x) = 2.21 \cdot e^{-2.01x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{2.01} \cdot \ln\left(\frac{x}{2.21}\right)$$

Using the plot above, evaluate  $f^{-1}(0.008)$ .

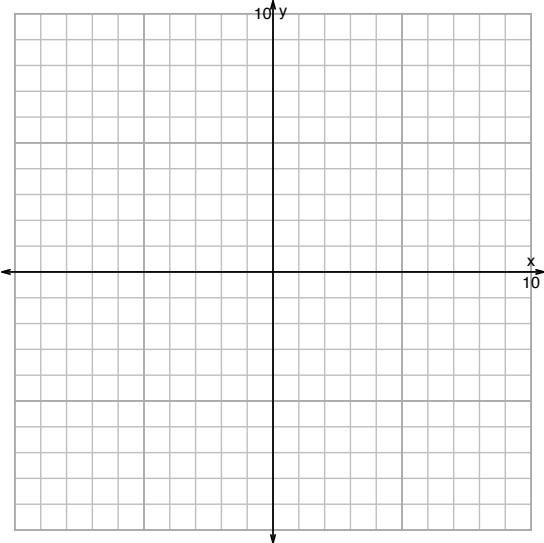
Name: \_\_\_\_\_

Date: \_\_\_\_\_

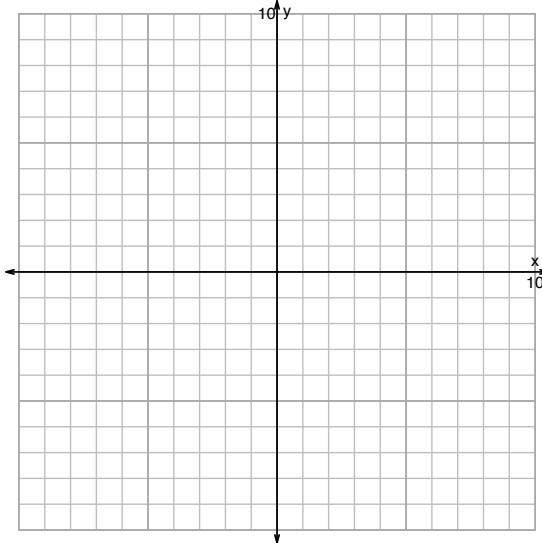
s18: EXP LOG (QUIZ v334)

1. (10 pts) Graph  $y = \log_2(x + 5) + 2$  and  $y = 2^{x+6} - 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x + 5) + 2$$



$$y = 2^{x+6} - 5$$

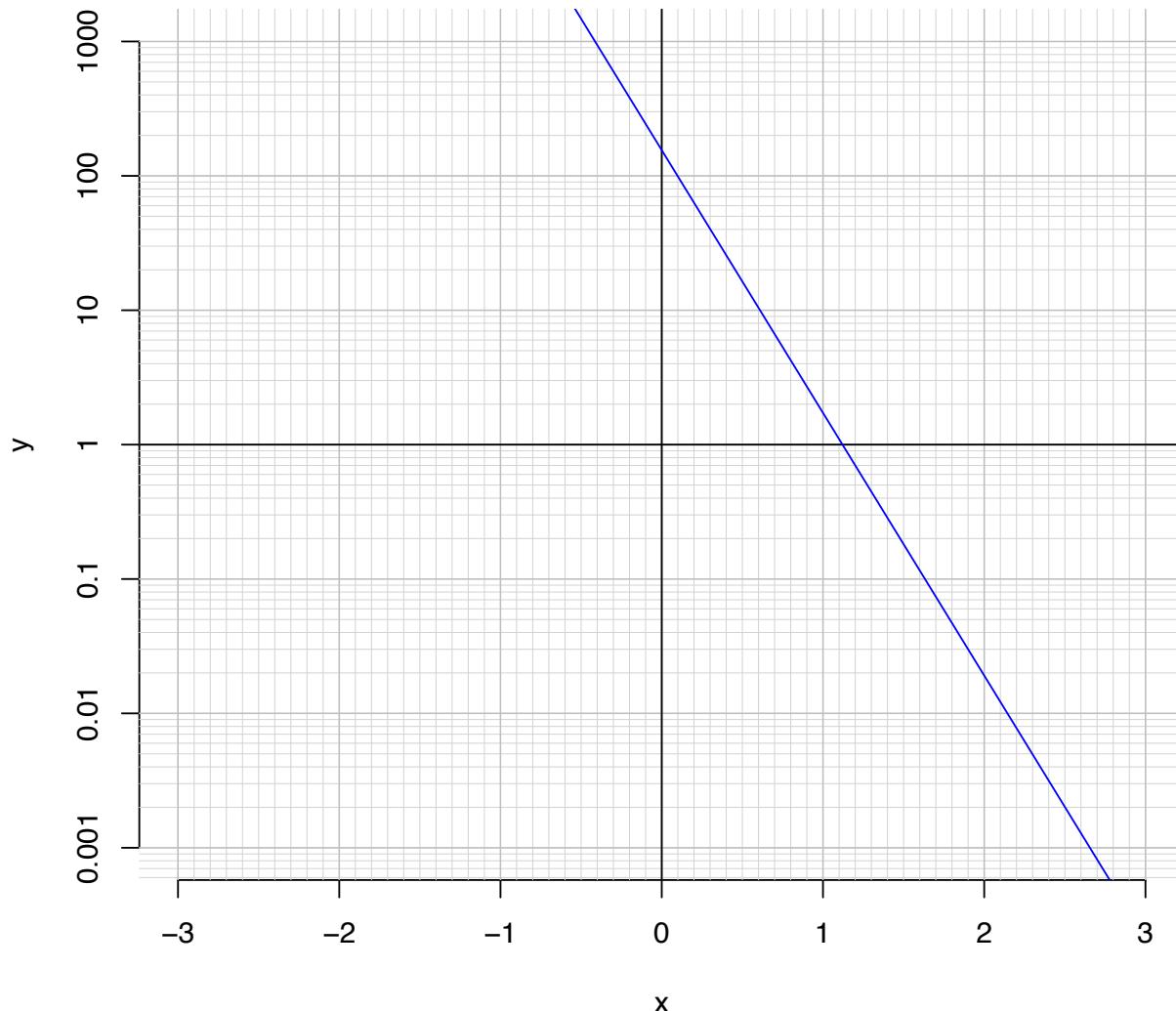


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-23 = \left(\frac{-3}{7}\right) \cdot 10^{-5t/4}$$

3. (10 pts) An exponential function  $f(x) = 155 \cdot e^{-4.5x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(1.9)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{4.5} \cdot \ln\left(\frac{x}{155}\right)$$

Using the plot above, evaluate  $f^{-1}(600)$ .

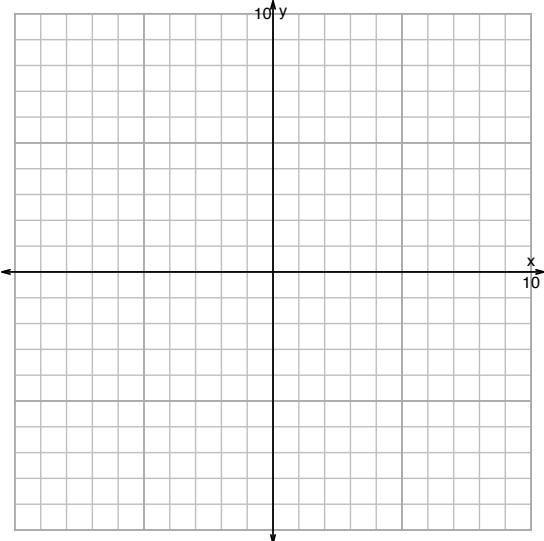
Name: \_\_\_\_\_

Date: \_\_\_\_\_

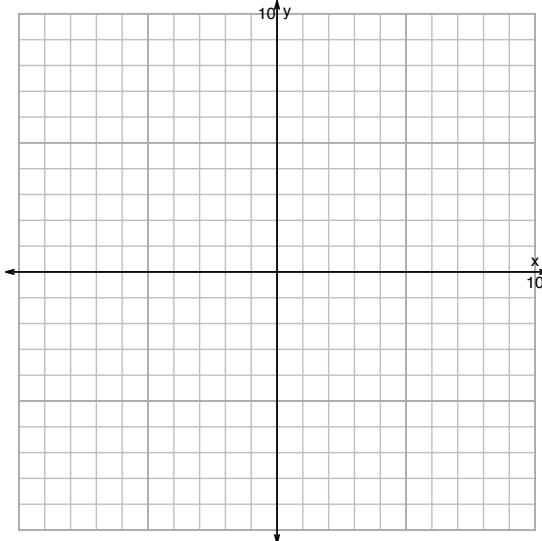
s18: EXP LOG (QUIZ v335)

1. (10 pts) Graph  $y = \log_2(x - 3) - 5$  and  $y = 2^{x-2} + 5$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 3) - 5$$



$$y = 2^{x-2} + 5$$

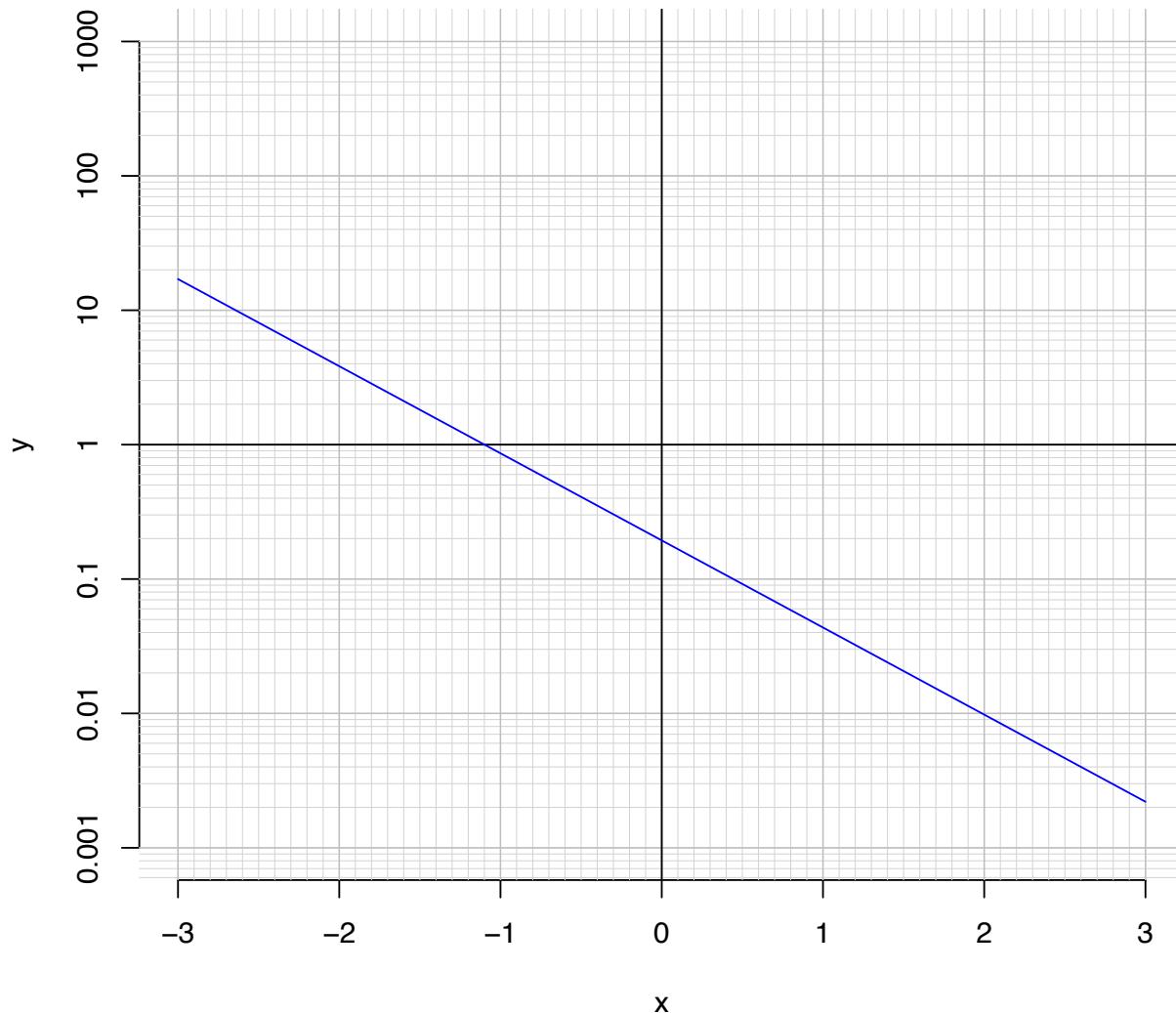


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-17 = \left(\frac{-3}{7}\right) \cdot 10^{5t/4}$$

3. (10 pts) An exponential function  $f(x) = 0.194 \cdot e^{-1.49x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.49} \cdot \ln\left(\frac{x}{0.194}\right)$$

Using the plot above, evaluate  $f^{-1}(6)$ .

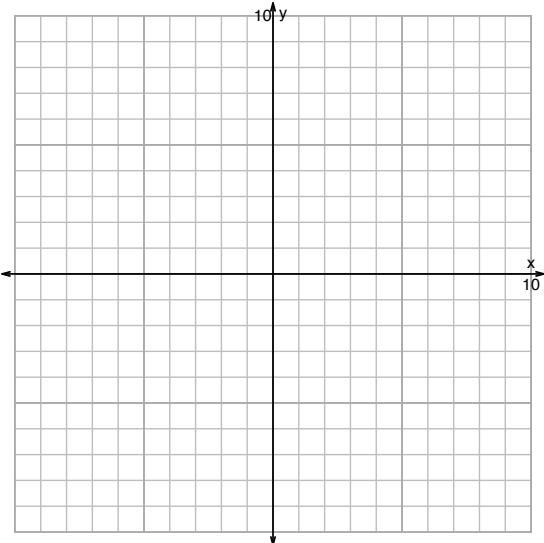
Name: \_\_\_\_\_

Date: \_\_\_\_\_

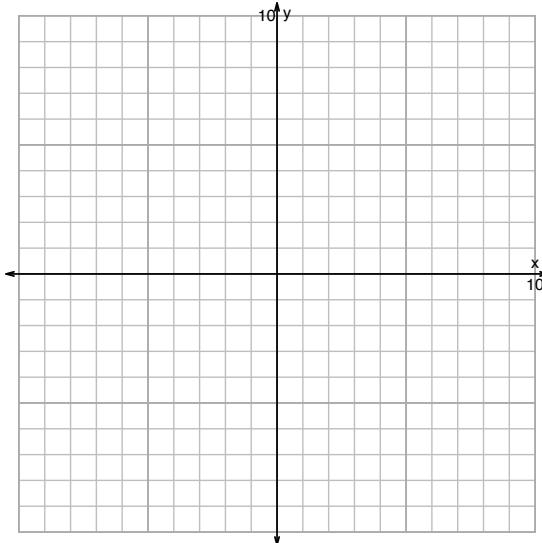
s18: EXP LOG (QUIZ v336)

1. (10 pts) Graph  $y = 2^{x-3} - 4$  and  $y = \log_2(x - 1) + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-3} - 4$$



$$y = \log_2(x - 1) + 4$$

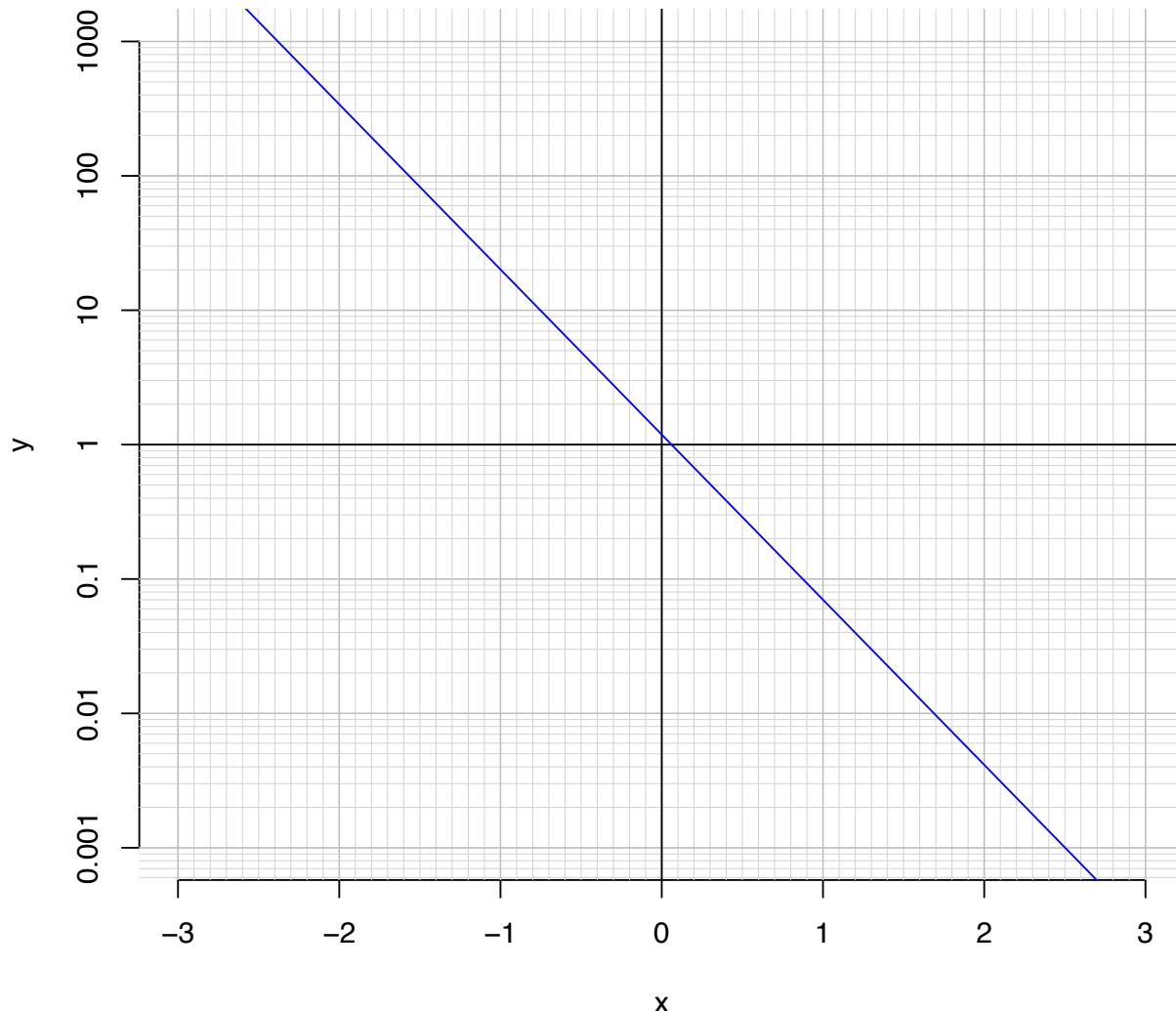


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$29 = \left(\frac{5}{7}\right) \cdot 2^{-3t/4}$$

3. (10 pts) An exponential function  $f(x) = 1.19 \cdot e^{-2.83x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.2)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{2.83} \cdot \ln\left(\frac{x}{1.19}\right)$$

Using the plot above, evaluate  $f^{-1}(0.03)$ .

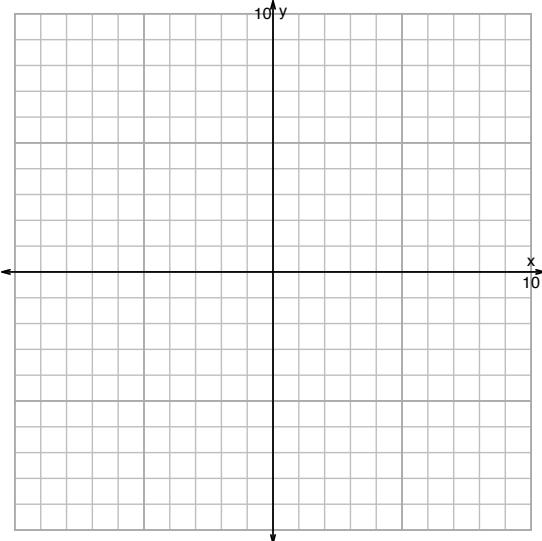
Name: \_\_\_\_\_

Date: \_\_\_\_\_

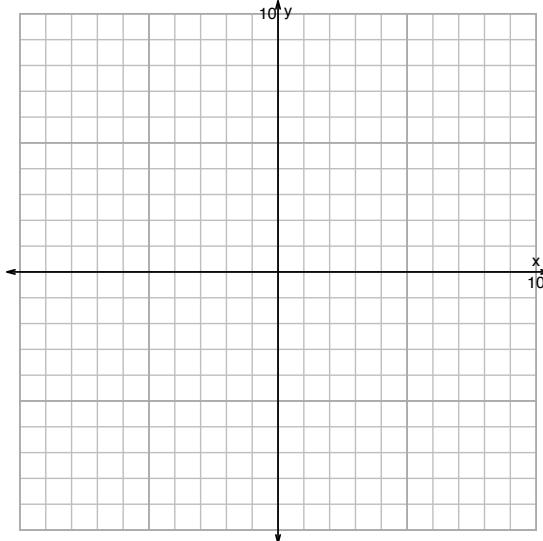
s18: EXP LOG (QUIZ v337)

1. (10 pts) Graph  $y = \log_2(x - 5) - 4$  and  $y = 2^{x-5} - 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 5) - 4$$



$$y = 2^{x-5} - 1$$

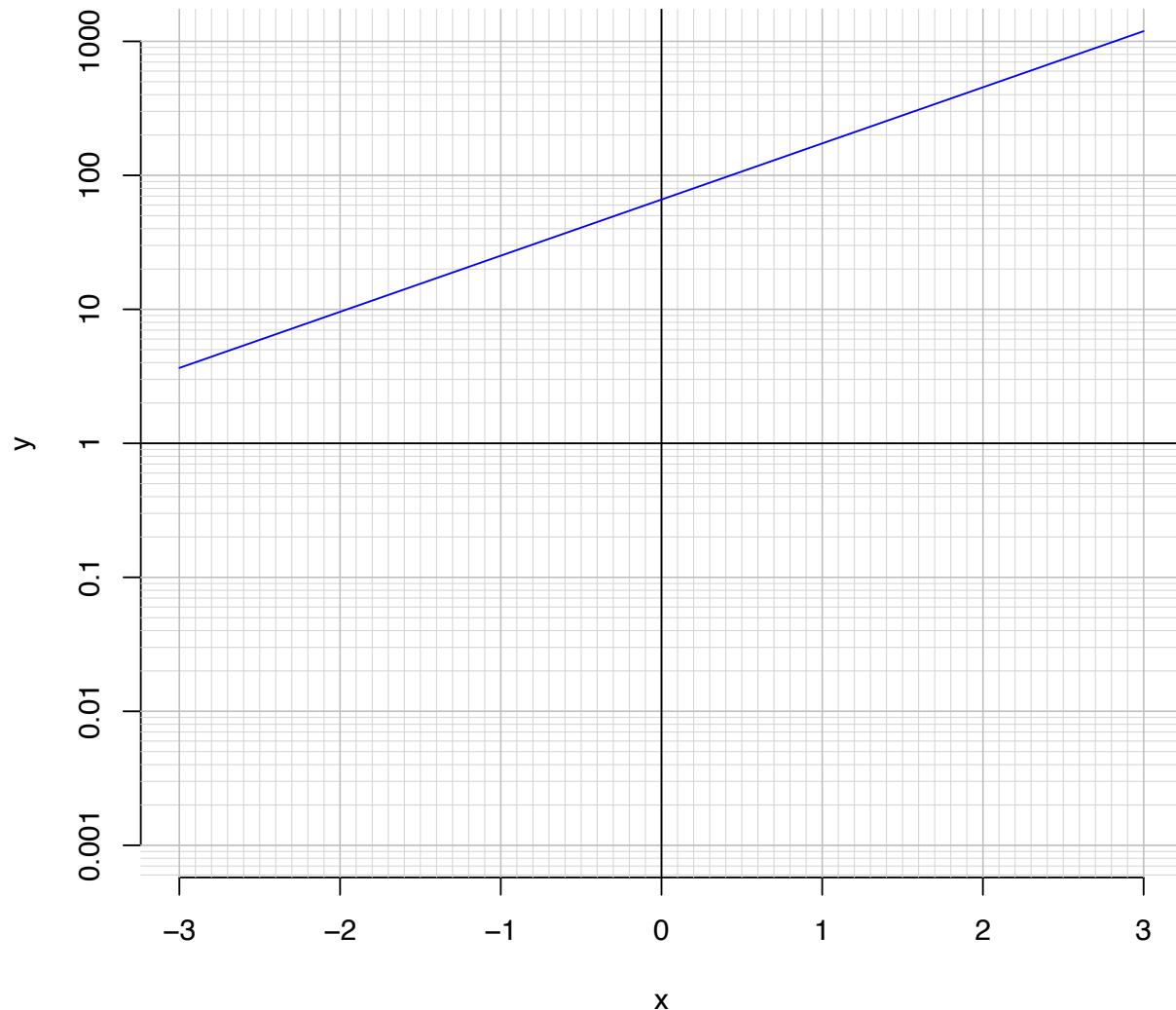


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$11 = \left(\frac{5}{7}\right) \cdot 2^{4t/3}$$

3. (10 pts) An exponential function  $f(x) = 66 \cdot e^{0.965x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(2.1)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{0.965} \cdot \ln\left(\frac{x}{66}\right)$$

Using the plot above, evaluate  $f^{-1}(80)$ .

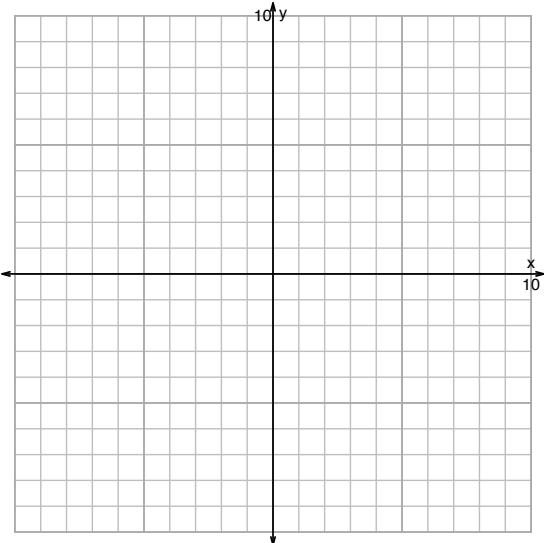
Name: \_\_\_\_\_

Date: \_\_\_\_\_

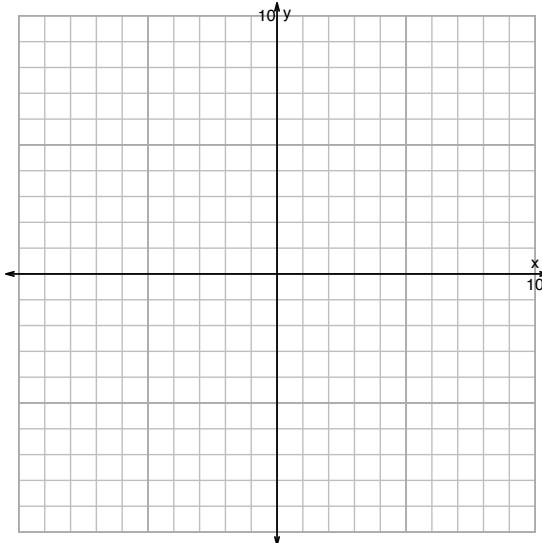
s18: EXP LOG (QUIZ v338)

1. (10 pts) Graph  $y = 2^{x+2} + 6$  and  $y = \log_2(x + 5) + 1$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x+2} + 6$$



$$y = \log_2(x + 5) + 1$$

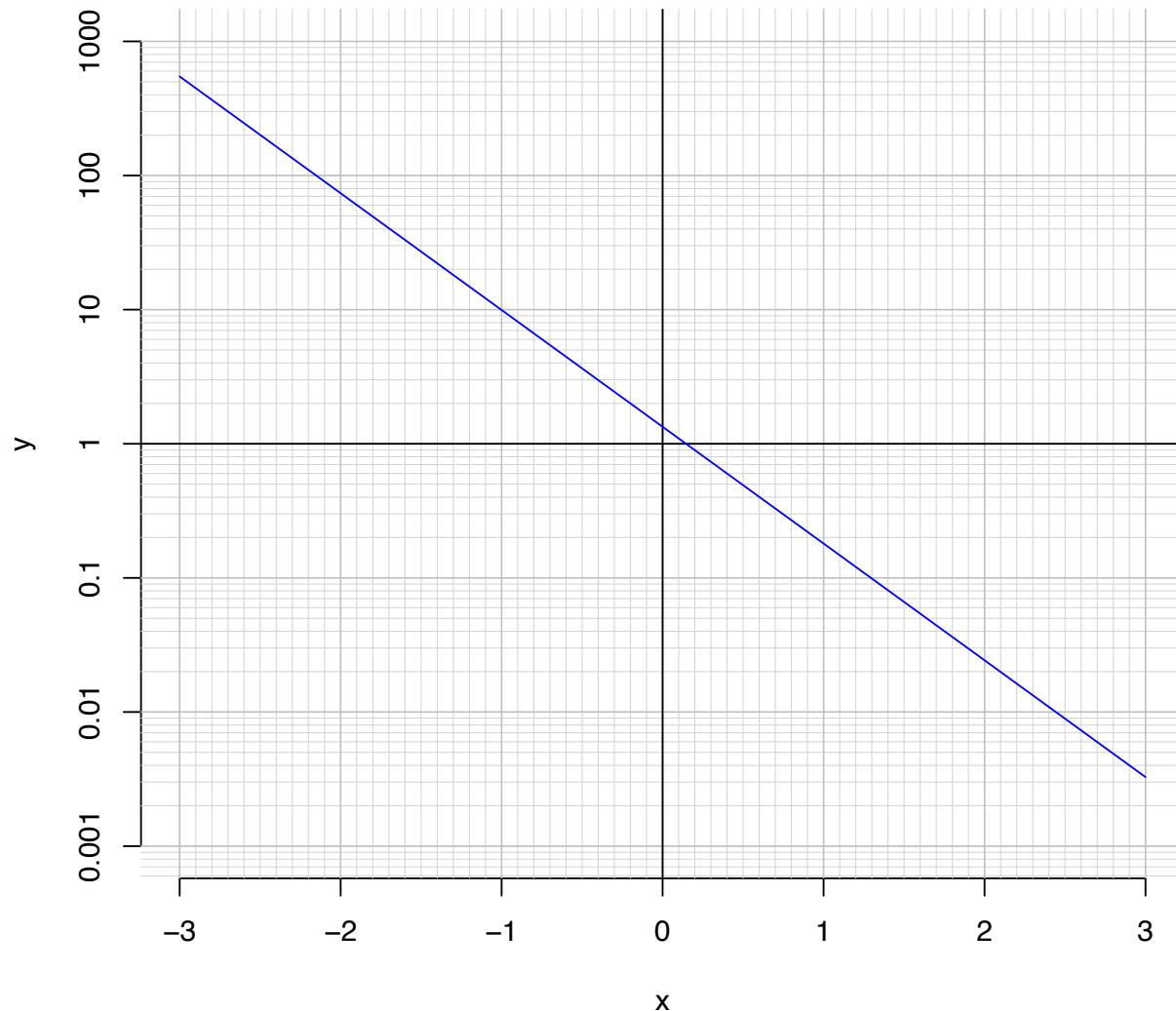


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$11 = \left(\frac{4}{7}\right) \cdot 10^{5t/3}$$

3. (10 pts) An exponential function  $f(x) = 1.34 \cdot e^{-2x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-2.7)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{2} \cdot \ln\left(\frac{x}{1.34}\right)$$

Using the plot above, evaluate  $f^{-1}(0.004)$ .

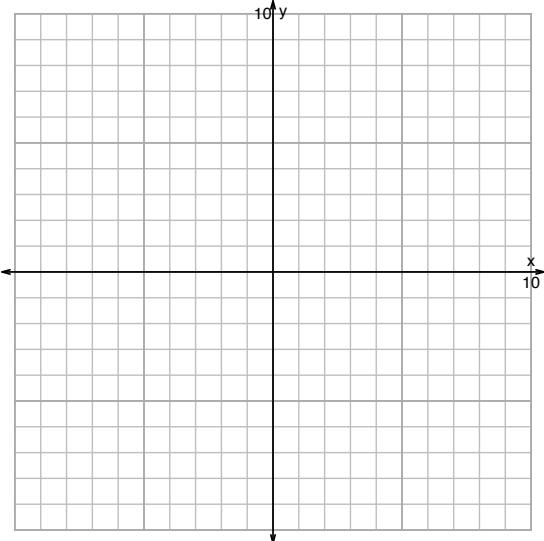
Name: \_\_\_\_\_

Date: \_\_\_\_\_

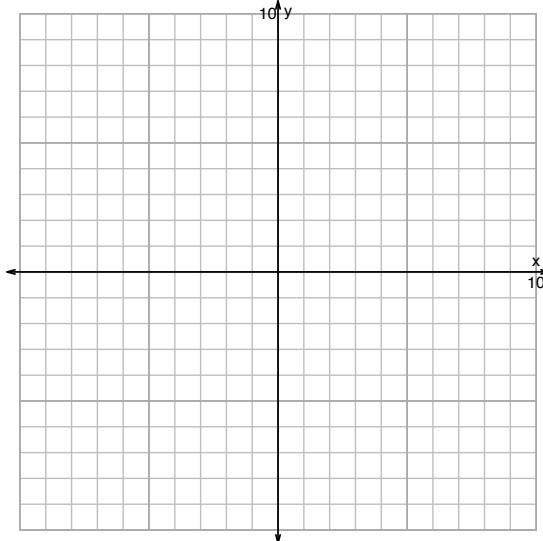
s18: EXP LOG (QUIZ v339)

1. (10 pts) Graph  $y = 2^{x-4} - 3$  and  $y = \log_2(x + 4) - 2$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = 2^{x-4} - 3$$



$$y = \log_2(x + 4) - 2$$

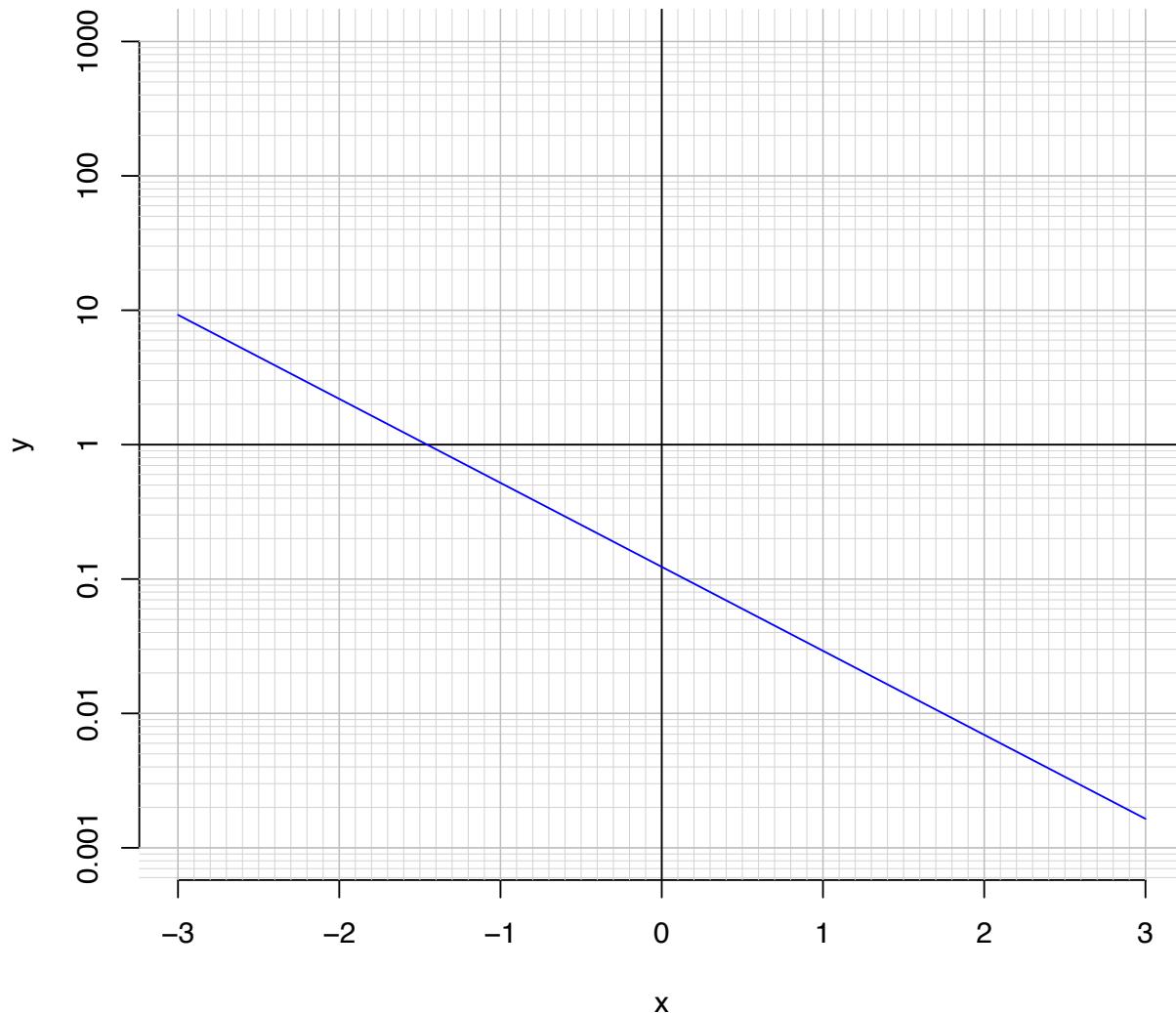


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-19 = \left(\frac{-7}{4}\right) \cdot 10^{3t/5}$$

3. (10 pts) An exponential function  $f(x) = 0.123 \cdot e^{-1.44x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(0.5)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{1.44} \cdot \ln\left(\frac{x}{0.123}\right)$$

Using the plot above, evaluate  $f^{-1}(8)$ .

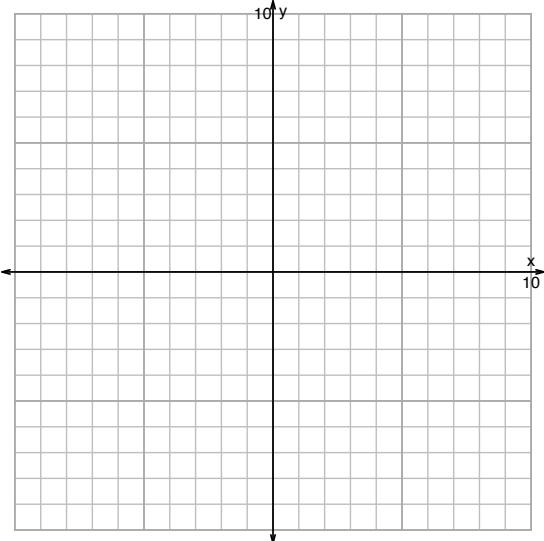
Name: \_\_\_\_\_

Date: \_\_\_\_\_

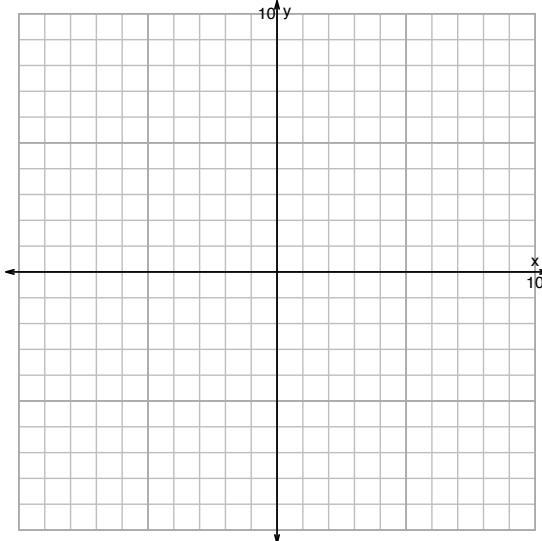
s18: EXP LOG (QUIZ v340)

1. (10 pts) Graph  $y = \log_2(x - 1) - 2$  and  $y = 2^{x-6} + 4$  on the grids below. Also, draw any asymptotes with dashed lines.

$$y = \log_2(x - 1) - 2$$



$$y = 2^{x-6} + 4$$

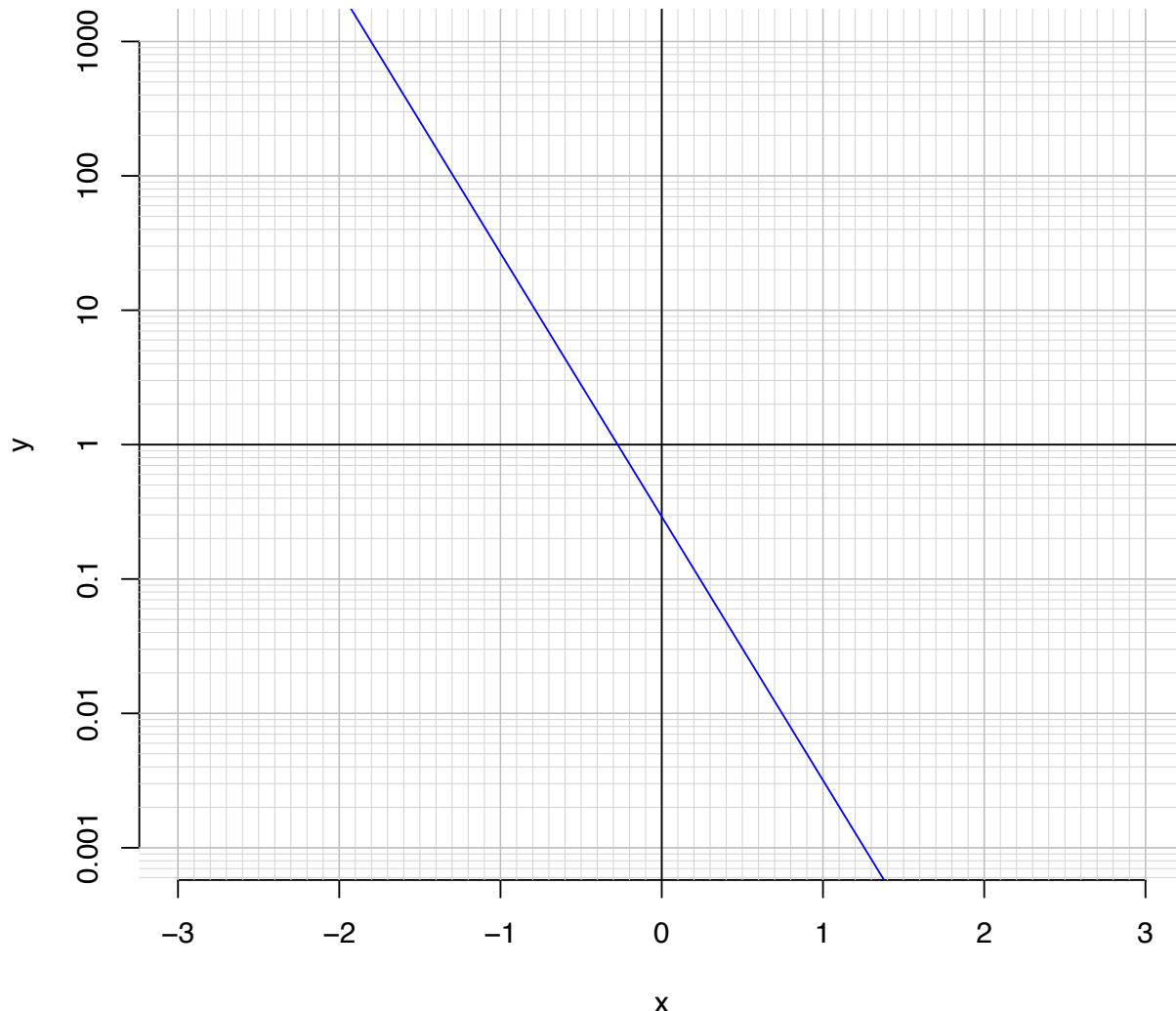


Somewhat useful hint:  $2^3 = 8$ , and thus  $\log_2(8) = 3$ .

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-17 = \left(\frac{-4}{5}\right) \cdot 2^{-3t/7}$$

3. (10 pts) An exponential function  $f(x) = 0.291 \cdot e^{-4.52x}$  is graphed below on a semi-log plot.



a. Using the plot above, evaluate  $f(-1.6)$ .

b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{-1}{4.52} \cdot \ln\left(\frac{x}{0.291}\right)$$

Using the plot above, evaluate  $f^{-1}(0.005)$ .